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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Rabbit IGF-I isofo Rabbit insulin lik Human liver-type I Human insulin-like Human IGF-I protei Human insulin like Insulin-like growt Homo Human IGF-I isofor Sequence of pre-pr Rat IGF-I isoform Human IGF-1. Description SUMMARIES AAE02447 AAE02449 AAW23301 AAP70277 AAE02448 AAE02450 AAU09067 AAR83803 AAW69733 AAW57882 DB Query Match Length 100.0 95.7 95.7 93.6 82.7 78.3 78.3 78.3 78.3 572.5 572.5 560 494.5 468 468 468 468 468 468 598 4 0 0 8 0 0 1 Result No.

Rabbit liver-type Human prepro-somat Rabbit liver-type	7.X	Chimeric rhiGF-1-A Rat liver-type IGF		nsed in	cide ligand	ligand	acid t	_	Recombinant botuli	Sequence of human	oŧ	Sequence of human	New insulin-like g	n-1	hIGF-I. Homo sapi	Peptide derived fr	Human IGF-I peptid	Sequence of insuli	Human insulin-like	Insulin like growt	5	Recombinant insuli	Peptide derived fr	Human mature insul	Human insulin-like	□	Insulin like growt	Amino acid sequenc	human	IGF-1A amino acid
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77.8	76.8	90	0	æ	œ	æ	68.8	9	4	64.4		64.4	64.4	64.4		64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4
465 461 459	4.	457.5	423	412	412	412	412	398	386	385	385	385	385	385	385	385	385	385	385	385	385	385	385	385	385	385	385	385	385	385
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ALIGNMENTS

Human IGF-I isoform mechano-growth factor (MGF) protein. AAE02447 standard; Protein; 110 AA (first entry) 10-AUG-2001 AAE02447; RESULT 1

Human; IGF-I isoform; Insulin-like Growth Factor-I; MGF; mechano-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclerosis: spinal muscular atrophy; muscular atrophy; poliomyelitis; post-polio syndrome; toxin; motoneurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzhelmer's disease; Parkinson's disease.

15-NOV-2000; 2000WO-GB04354. WO200136483-A1 25-MAY-2001

Homo sapiens

99GB-0026968 (UNLO) UNIV COLLEGE LONDON 15-NOV-1999;

Goldspink G, Johnson I;

WPI; 2001-355620/37. N-PSDB; AAD06398.

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The present invention relates to use of mechano-growth factor (MGF), an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a medicament for the treatment of neurological disorder. The MGF is capable of reducing motoneurone loss by 20% or greater in response to nerve avulsion, and effects motoneurone rescue, preferably adult motoneurone rescue. The MGF polynucleotide and polypeptide are useful in the manufacture of a medicament for the treatment of a neurological disorder,
                                                                                                                                                                                                                                                                                         including a disorder of motoneurones and/or neurodegenerative disorder, eg., amyokrophik lateral sclerosis, spinal muscular atrophy, progressive spinal muscular atrophy, infantile or juvenile muscular atrophy, of a post-polio syndrome, a disorder caused by exposure to a poliomyelitis or post-polio syndrome, a disorder caused by exposure to a
                                                                                                                                                                                                                                                                                                                                                                      toxin, motoneurone trauma, a microneurone lesion or nerve damage, an injury that affects motoneurones, motoneurone loss associated with aging, peripheral neuropathies, Alzahimer's disease and Parkinson's disease. The present sequence is human IGF-I isoform MGF MGF is a muscle isoform having extracellular (EC) domain, hence also referred as IGF-I.Ec. The MGF protein comprises amino acid sequences encoded by nucleic acid sequence of IGF-I exons 4, 5 and 6 in the reading frame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rabbit; IGF-I isoform; Insulin-like Growth Factor-I; MGF; mechano-growth factor; neurological disorder; neurodegenerative disorder; menyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; poliomyelitis; post-polio syndrome; toxin; motoneurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease.
               Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 598; DB 22; Length 110; 100.0%; Pred. No. 2.4e-54; tive 0; Mismatches 0; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rabbit IGF-I isoform mechano-growth factor (MGF) protein.
                                                                                                    Claim 4; Page 50-51; 66pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAE02449 standard; Protein; 111 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15-NOV-2000; 2000WO-GB04354
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110; Conservative
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Best Local S:
Matches 110
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The present invention relates to use of mechano-growth factor (MGF),
an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a
medicament for the treatment of neurological disorder. The MGF is capable.
Cof reducing motoneurone loss by 20% or greater in response to nerve
avulsion, and effects motoneurone rescue, preferably adult motoneurone
cof rescue. The MGF polynucleotide and polypeptide are useful in the
manufacture of a medicament for the treatment of a neurological disorder,
including a disorder of motoneurones and/or neurodegenerative disorder,
cof amyotrophic lateral sclerosis, spinal muscular atrophy,
cof spinal muscular atrophy, infantile or juvenile muscular atrophy,
cof poliomyelitis or post-polio syndrome, a disorder caused by exposure to a
comparative that affects motoneurone lesion or nerve damage, an
injury that affects motoneurones, motoneurone loss associated with aging,
autosomal or sex-linked muscular dystrophy, diabetic neuropathy,
cof peripheral neuropathies, Alzheimer's disease and Parkinson's disease.
Cof peripheral neuropathies is rabbit GEO; domain, hence also referred as
cof isoform having extracellular (EC) domain, hence also referred as
cof coffice and sequence of IGF-I exons 4, 5 and 6 in the reading frame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1;
                                                                                                                     Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder - \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GPETLCGAELVDALQEVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Insulin like growth factor 1; IGF-1; Ec peptide; muscle disorder; heart; neuromuscular disease.
                                                                                                  mechano-growth factor, an isoform of Insulin-like Growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             95.7%; Score 572.5; DB 22; Length 111; 96.4%; Pred. No. 1.1e-51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQ-RRKGSTFEEHK 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRKGSTFEEHK 111
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rabbit insulin like growth factor 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAW23301 standard; Protein; 121 AA.
                                                                                                                                                                                 Claim 4; Page 54; 66pp; English.
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    Johnson I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Oryctolagus cuniculus.
                                       WPI; 2001-355620/37.
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                                                         N-PSDB; AAD06400
Goldspink G,
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10-AUG-2001 (first entry)
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                                                                                                                                                                               Local Similarity
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                                                                                                                                                                                          Matches 103;
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                                                                                                                                                                                                                                                                                                                                      1;
                                                                                                                 A use of insulin like growth factor I (IGF-1) has been developed, and is characterised by the presence of the Ec peptide, or a functional equivalent, in the treatment or therapy of a human or animal. The IGF-1 polypeptide can be used to treat muscular disorders, e.g. Duchenne or Becker muscular dystrophy, autosomal dystrophies and related progressive skeletal muscle weakness and wasting, muscle atrophy in ageing humans, spinal cord injury induced muscle atrophy and neuromuscular diseases, and cardiac disorders, e.g. diseases where promotion of cardiac muscle protein synthesis is a beneficial treatment, cardiomyopathies and acute hear failure or insult, specifically myocarditis or myocardial infarction. It can also be used to promote bone fracture healing and maintenance of bone in old age. The present sequence represents rabbit IGF-1 used in the present specification.
                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                              1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                           Use of insulin like growth factor I characterised by presence of Ecpeptide - to treat humans or animals, particularly muscle disorders, heart conditions or neuromuscular diseases
                                                                                                                                                                                                                                                                                                                                                                          ij
                                                                                                                                                                                                                                                                                                              DB 18; Length 121;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence of pre-pro-insulin-like growth factor 1B (ppIGF-1B).
                                                                                                                                                                                                                                                                                                                                                                                                         CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQ-RRKGSTFEEHK 110
                                                                                                                                                                                                                                                                                                                                                                                                                     recombinant DNA procedures for use as growth promoters for enhancing lactation, for stimulating cell proliferation etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New pre-pro-insulin-like growth factor-1 protein - obtd. by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cell proliferation.
                                                                                                                                                                                                                                                                                                                .5;
.1.2e-51;
2;
                                                                                                                                                                                                                                                                                                             95.7%; Score 572.5; 96.4%; Pred. No. 1.2e
                                                                                                                                                                                                                                                                                                                                      1; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAP70277 standard; protein; 195 AA
                                                                                             Disclosure; Fig 3; 33pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                        Best Local Similarity 96.4
Matches 107; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1987-200203/29.
         WPI; 1997-470877/43
                                                                                                                                                                                                                                                                                       121 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     06-JAN-1987;
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                                                                                                                                                                                                                                                                                       Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder -
A 42 base oligonucleotide corresponding to the DNA sequence encoding amino acids 10 to 23 of mature human IGF-I was synthesized (AAN70437). The radiolabeled 42 mer was then employed to screen for IGF-I containing DNA sequences in a human liver CDNA library. Insulin-like growth factors-IA and -1B cDNAs were isolated from a human cDNA library by using lambdagt 11 (AAN70435, AAN70436). The human IGF-I genomic gene was isolated and mapped. It encodes at least two preproinsulin-like growth factor-1 proteins. An essentially pure proproinsulin-like growth factor-1 protein comprising the sequence of amino acids shown in Figure six is claimed (AAP70277).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GPETLCGAELVDALOFVCGDRGFYFNKPTGYGSSSRRAPOTGIVDECCFRSCDLRRLEMY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 195;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rat; IGF-I isoform; Insulin-like Growth Factor-I; MGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rat IGF-I isoform mechano-growth factor (MGF) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRRKG 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             109 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRRKG 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 560; DB 8; Pred. No. 3.8e-50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             93.6%; Scor.
100.0%; Pred. No. s...
... 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAE02448 standard; Protein; 111
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rescue. The MGF polynucleotide and polypeptide are useful in the manufacture of a medicament for the treatment of a neurological disorder, including a disorder of motoneurones and/or neurodegenerative disorder, e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive spinal muscular atrophy, progressive poliomyelitis or post-polio syndrome, a disorder caused by exposure to a toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an injury that affects motoneurones, motoneurone loss associated with aging, peripheral neuropathies, Alzhaner's disease and Parkinson's disease. The present sequence is rat IGF-I isoform MGF MGF is a muscle isoform having extracellular (EC) domain, hence also referred as isoform having extracellular (EC) domain, hence also referred as since isoform lateral catid sequence of IGF-I exons 4, 5 and 6 in the reading frame
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111 AA; Sequence

1; Gaps 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60 ; H Length 111; Score 494.5; DB 22; Length Pred. No. 1.2e-43; 2; Mismatches 13; Indels 82.7%; 85.6%; 95; Conservative Query Match Best Local Similarity Matches

61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGSTLEEHK 111 qq

RESULT 6 AAE02450

AAE02450 standard; Protein; 105 AA.

AAE02450;

(first entry) 10-AUG-2001

Human liver-type IGF-I isoform (L.IGF-I) protein.

mechano-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; poliomyelitis; post-polio syndrome; toxin; motoneurone disorder; nerve danage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease; liver; L.IGF-I. Human; IGF-I isoform; Insulin-like Growth Factor-I; MGF;

Homo sapiens.

WO200136483-A1.

25-MAY-2001.

15-NOV-2000; 2000WO-GB04354.

(UNLO) UNIV COLLEGE LONDON.

99GB-0026968

15-NOV-1999;

Johnson I; Goldspink G,

WPI; 2001-355620/37. N-PSDB; AAD06403.

Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder -

Disclosure; Fig 8; 66pp; English.

The present invention relates to use of mechano-growth factor (MGF),

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an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a medicament for the treatment of neurological disorder. The MGF is capable of reducing motoneurone loss by 20% or greater in response to nerve avulsion, and effects motoneurone rescue, preferably adult motoneurone rescue. The MGF polynuclechide and polypeptide are useful in the manufacture of a medicament for the treatment of a neurological disorder, including a disorder of motoneurones and/or neurodegenerative disorder, e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive spinal muscular atrophy, infantile or juvenile muscular atrophy, progressive poliomyelitis or post-polio syndrome, a disorder caused by exposure to a
                                                                                                                                                                                                            toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an injury that affects motoneurones, motoneurone loss associated with aging, autosomal or sex-linked muscular dystrophy, diabetic neuropathy, peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The present sequence is human liver-type IGF-I isoform (L.UGF-I). The L.IGF-I protein comprises amino acid sequences encoded by nucleic acid sequence of IGF-I exons 4 and 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Regulating memory consolidation in an animal comprising treating with an agent that modulates activity of one or more genes from z1f268, insulin-like growth factor, glutamate receptor 2, c/EBPbeta and VGF \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GPETLCGAELVDALQEVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; long-term memory protein; LTM; insulin-like growth factor; neuroleptic; anticonvulsant; nootropic; neuroprotective; IGFL; cerebroprotective; drug discovery; therapeutic profiling; learning disability; memory impairment; brain injury; epilepsy; mental retardation; senile dementia; Alzheimer's disease.
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                                                                                                                                                                                                                                                                                                                                                                                                                        Length 105;
                                                                                                                                                                                                                                                                                                                                                                                                                      78.3%; Score 468; DB 22;
100.0%; Pred. No. 6.4e-41;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human insulin-like growth factor, IGF1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAU09067 standard; Protein; 137 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  86; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alberini CM, Bear MF;
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N-PSDB; AAS14695.
                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                 105 AA;
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                                                                                                                                                                                                                                                                                                                                                                                      Seguence
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The invention relates to modulating long term memory consolidation in an animal comprises treating with an agent that modulates the activity of one or more of genes from zif208, insulin-like growth factor (IGF), glutamate receptor 2 (GluR2), c/EBPbeta and neuroendocrine VGF (neurotroplu-inducible gene). The method is useful for indentified a drug and/or target discovery business, which comprises conducting a drug and/or target discovery business, which comprises conducting therapeutic profiling of the agents (or their comprises conducting therapeutic profiling of the agents of formulating a pharmaceutical preparation including one or more agents (or analogues) identified, for efficacy and toxicity in animals, and formulating a pharmaceutical preparation including one or more agents (or a third party the rights for further drug development of the comprises an additional step of establishing a distribution system for distributing the preparation for sale and may optionally controlling as alses group for marketing the preparation. A pharmaceutical composition containing the agent is useful for enhancing memory consolidation in an animal, or for augmenting learning and memory, or otherwise for enhancing the functional performance of central nervous system neurons, where the agent is a cAMP elevating agent (agonts) or otherwise for enhancing the functional performance of central nervous system neurons, where the agent is a cAMP elevating agent (agonts) or otherwise for enhancing disabilities, memory impairment e.g. cativates adenylate cyclase. The composition is useful for treating clue to toxicant exposure, brain injury, epilepsy, mental retardation in children and senile dementia, including Alzheimer's disease. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
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asthma;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Insulin-like growth factor 1 receptor; IGF-1; synthetic peptide;
autophosphorylation; cellular growth; proliferation; restenosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 78.3%; Score 468; DB 22; Length 137; Best Local Similarity 100.0%; Pred. No. 8.5e-41; Matches 86; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               49..118
/label= mature peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           93 CAPLKPAKSARSVRAQRHTDMPKTQK 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAPLKPAKSARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              78..89
/label= C domain
90..110
/label= A domain
111..118
/label= D domain
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/label= B domain
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               burn; wound; brain metastasis.
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22-JUN-1995

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The amino acid sequence of the insulin-like growth factor 1 pre-protein. Processing of the protein results in a 70 amino acid mature protein. The mature protein is split into 4 domains: the B domain has strong homology to the B chain of insulin, the A domain similarly has homology to the A chain of insulin. These domains are separated by a C domain and the C mature protein is terminated by a D domain at the C -terminus. The D domain sequence was used to synthesis peptides (AARB3801-2) that include amino acid residues 60-64 of the mature IGF-1 protein. IGF-1 binds to the IGF-1 receptor (IGF-1R) via the D domain and induces activation of the IGF-1R by autophosphorylation of the IGF-1R.

Activated IGF-1R is associated with cellular growth and proliferation. The synthetic peptides are useful as inhibitors of IGF-1R.

The synthetic peptides are useful as inhibitors of IGF-1 binding to IGF-1R and thus may be used in the treatment of disorders characterised by undesirable cell proliferation eg. cancer, restenosis, asthma, burns,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                            New synthetic IGF-1 analogues comprising 5-25 amino acids - useful in treatment of diseases associated with undesirable cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; IGF-1; insulin-like growth factor 1; urinary incontinence; gene therapy; neurotrophic factor.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 153;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 468; DB 16;
Pred. No. 9.5e-41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Pred. No. ...
                                                                                                                                                                                                                                              Disclosure; Page 20-21; 28pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAW69733 standard; Protein; 153 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 CAPLKPAKSARSVRAQRHTDMPKTQK
                                                                               (UYJE-) UNIV JEFFERSON THOMAS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               78.3%;
             94WO-US14576
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                                              93US-0167653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                wounds or brain metastases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              86; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (GENE-) GENEMEDICINE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
                                                                                                                                             WPI; 1995-231515/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              153 AA;
                                                                                                                                                                                                             proliferation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO9833529-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       04-FEB-1997;
                                              15-DEC-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26-0CT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       06-AUG-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human IGF-1
                                                                                                                Baserga R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sednence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAW69733;
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This sequence is the invalid factor of the invention, for expression of a nucleic acid sequence in a cell, which comprises: (a) a nucleic acid cassette containing a sequence encoding IGF-I; (b) a 5' flanking region including one or more sequences necessary for expression of the nucleic acid cassette, including a promoter from a skeletal alpha-actin gene; (c) a linker connecting the 5' flanking region to a nucleic acid, the coll cassette, including a promoter from a skeletal alpha-actin gene; (c) a linker connecting the 5' flanking region to a nucleic acid, the lacking the coding sequence of a gene with which it is naturally associated; and (d) a 3' flanking region, including a 3' untranslated cassociated; and (d) a 3' flanking region, including a 3' untranslated acid, the position for inserting the nucleic acid cassette and comprises a sequence from a growth hormone 3'-UPR. The vector can provide for efficient IGF-I expression, particularly in gene therapy. It can be used for the delivery of IGF-I for treating diseases such as muscle atrophy, clabetes, neuropathy, osteoporosis, and growth disorders. They can be used for treating peripheral neuropathies resulting from diabetes, genetic disease such as Type I or Type II diabetes, and cancer and cancer and seamone and side-effects from anti-cancer and contained the contained of the provider of the monthlia, inflammation and side-effects from anti-cancer and contained the contained of the cast of the
                                        sequence is the human insulin-like growth factor I (IGF-I).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               109 CAPLKPAKSARSVRAQRHTDMPKTQK 134
  Disclosure; Fig 13; 115pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAW23302 standard; Protein; 156 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 CAPLKPAKSARSVRAQRHTDMPKTQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97WO-GB00658
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
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N-PSDB; AAT84894.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                153 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   W09733997-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11-MAR-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14-APR-1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sednence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAW23302;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 11
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                                                                                                                                                                                                         A method has been developed of treating urinary incontinence (UI) in mammals. The method comprises delivering a nucleic acid vector for the expression of a growth factor or neurotrophic factor in a tissue or tissues. The present sequence represents human IGF-1 (insulin-like growth factor 1) which is used in the method of the invention. Due to the growth and stimulatory effects of growth factors and neurotrophic factors, introducing these factors to degenerated muscles in the urinary system can improve UI by enhancing both their integrity and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                             Treatment of urinary incontinence - by delivering nucleic acid vector for expression of growth factor or neurotrophic factor in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New vector for expression of insulin-like growth factor-I containing a skeletal alpha-actin gene promoter, IGF-I coding sequences and a 3' region from growth hormone 3'-UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 78.3%; Score 468; DB 19;
100.0%; Pred. No. 9.5e-41;
iive 0; Mismatches 0;
                                                                                                                                                                      Claim 12d; Page 108-109; 117pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                109 CAPLKPAKSARSVRAQRHTDMPKTQK 134
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAW57882 standard; Protein; 153 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Schwartz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (BAYU ) BAYLOR COLLEGE MEDICINE. (GENE-) GENEMEDICINE INC.
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N-PSDB; AAV40793, AAV40794.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       86; Conservative
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                                WPI; 1998-437184/37.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human IGF-I protein.
                                                                                                                                                                                                                                                                                                                                                                        neural innervation.
                                                                                                                                                                                                                                                                                                                                                                                                            153 AA;
                                                      N-PSDB; AAV50425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-DEC-1997;
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Coleman M;
                                                                                                                                                                                                                                                                                                                                                                                                              Sednence
                                                                                                                                    tissue(s)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAW57882;
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Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 10
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49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                          1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Use of insulin like growth factor I characterised by presence of Ec peptide \, \cdot \, to treat humans or animals, particularly muscle disorders,
anti-viral drugs. The vectors can also be used to create transgenic animals for research or livestock improvement.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Insulin like growth factor 1; IGF-1; Ec peptide; muscle disorder; heart; neuromuscular disease.
                                                                                                                                                                                                                                                                    ó;
                                                                                                                                                                                      78.3%; Score 468; DB 19; Length 153; 100.0%; Pred. No. 9.5e-41;
                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human insulin like growth factor 1 Ea isoform.
                                                                                                                                                                                                                         Best Local Similarity · 100.0%; Pred. No. 9.5
Matches 86; Conservative 0; Mismatches
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present invention relates to use of mechano-growth factor (MGF), Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human prepro-somatomedin-C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31-JUL-1991 (first entry)
                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 98.8 Matches 85; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (CHIR-) CHIRON CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1986-042104/06.
                                                                                                                                                                                                                                                                                                           105 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13-JUL-1984;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAP60578;
                                                                                                                                                                                                                                                                                                           Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Protein
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rabbit; IGF-I isoform; Insulin-like Growth Factor-I; MGF; mechano-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; poliomyelitis; post-polio syndrome; toxin; motoneurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy;
                                                                                                         progressive
                                                A use of insulin like growth factor I (IGF-1) has been developed, and is characterised by the presence of the Ec peptide, or a functional equivalent, in the treatment or therapy of a human or animal. The IGF-1 polypeptide can be used to treat muscular disorders, e.g. Duchenne or Becker muscular dystrophy, autosomal dystrophies and related progressive skeletal muscle weakness and wasting, muscle atrophy in ageing humans, spinal cord injury induced muscle atrophy and neuromuscular diseases, and cardiac disorders, e.g. diseases where promotion of cardiac muscle protein synthesis is a beneficial treatment, cardiomyopathies and acute heart failure or insult, specifically myocarditis or myocardial infarction. It can also be used to promote bone fracture healing and maintenance of bone in old age. The present sequence represents human IGF-1 Ea isoform used in the present specification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder -
                                                                                                                                                                                                                                                                                                                                              52 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 111
                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                     1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                             ..
                                                                                                                                                                                                                                                                    Length 156;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sex-linked muscular dystrophy; peripheral neuropathy;
Alzheimer's disease; Parkinson's disease; liver; L.IGF-I.
                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rabbit liver-type IGF-I isoform (L.IGF-I) protein.
                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                 Score 468; DB 18;
Pred. No. 9.7e-41;
                                                                                                                                                                                                                                                         heart conditions or neuromuscular diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure; Page 60-61; 66pp; English.
                                                                                                                                                                                                                                                                                                                                                                                       112 CAPLKPAKSARSVRAQRHTDMPKTQK 137
                                                                                                                                                                                                                                                                                                                                                                           86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAE02452 standard; Protein; 105 AA.
                          Disclosure; Fig 4; 33pp; English.
                                                                                                                                                                                                                                                                                                                                                                         61 CAPLKPAKSARSVRAQRHTDMPKTQK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                            86; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Oryctolagus cuniculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2001-355620/37.
                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                       156 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-MAY-2001
                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAE02452;
                                                                                                                                                                                                                                                                                            Matches
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ID AAE0
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medicament for the treatment of neurological disorder. The MGF is capable of reducing motoneurone loss by 20% or greater in response to nerve avulsion, and effects motoneurone rescue, preferably adult motoneurone rescue. The MGF polynucleotide and polypeptide are useful in the manufacture of a medicament for the treatment of a neurological disorder, including a disorder of motoneurones and/or neurodegenerative disorder, e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive spinal muscular atrophy, infantile or juvenile muscular atrophy, politome, a disorder caused by exposure to a toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an
                                                                                                                                                                                                                                                                                                                                               injury that affects motoneurones, motoneurone loss associated with aging, autosomal or sex-linked muscular dystrophy, diabetic neuropathy, peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The present sequence is rabbit livertype IGF-I isoform (L.IGF-I). The L.IGF-I protein comprises amino acid sequences encoded by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Note: The present sequence (SEQ ID NO: 14) is stated as being the same as that shown in figure 10 (AAE02456) of the specification. However it differs at few positions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The L.IGF-I protein comprises amino acid sequences encoded by nucleic acid sequence of IGF-I exons 4 and 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 105;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 465; DB 22;
Pred. No. 1.3e-40;
1; Mismatches 0;
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/label= prepro-somatomedin-C
15..84
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/label= mature somatomedin-C
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAP60578 standard; Protein; 119 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 CAPLKPAKSARSVRAQRHTDMPKTQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1;
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98.8%;
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JP05199878-A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        02-DEC-1991;
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                                                                                                                                                                                                                                                                                                                                                                                                                                               03-MAR-1994
                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                           AAR40844;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      therapy
                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                 RESULT 1:
AAR40844
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0
                                                                                                                                                                                                                                                                                                                                                                     Rabbit; IGF-I isoform; Insulin-like Growth Factor-I; MGF; mechano-growth factor; neurological disorder; neurodegenerative disorder; mayotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; pollomyelitis; post-pollo syndrome; toxin; motoneurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease; liver; L.IGF-I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder -
                                                                                                                                                                                                                                                                                                                                                   Rabbit liver-type IGF-I isoform (L.IGF-I) protein, alternative version.
                                                                                                                                                        Gaps
                                                                                                                                                                             9
                                                                                                                                                                                     15 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDHRLEMY 74
                                      The sequence is human prepro-somatomedin-C. DNA probes prepared against DNA encoding the protein sequence may be used to detect the presence of the genes in a natural source. The probes may be used to detect mutations and/or deletions in humans suffering from growth deficiencies. See also AAN60489, AAN60491
                                                                                                                                                                          1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                        .;
                                                                                                                                   Length 119;
                                                                                                                                                        1; Indels
                                                                                                                                   ; DB 7; I
3.8e-40;
                                                                                                                                  Score 461; DB
Pred. No. 3.8e-
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "Encoded by GAG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'note= "Encoded by GAG"
                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                        AAE02456 standard; Protein; 105 AA.
                                                                                                                                                                                                                  61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; Fig 10; 66pp; English.
                    Disclosure; Fig 1; 20pp; English.
                                                                                                                                   77.18;
98.88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (UNLO ) UNIV COLLEGE LONDON.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-NOV-2000; 2000WO-GB04354
                                                                                                                                                                                                                                                                                                                                10-AUG-2001 (first entry)
                                                                                                                                  Query Match 77.1
Best Local Similarity 98.8
Matches 85; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Johnson I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Oryctolagus cuniculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-355620/37.
                                                                                                               119 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N-PSDB; AAD06405.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200136483-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Soldspink G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-NOV-1999;
 liver cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-MAY-2001
                                                                                                                                                                                                                                                                                                            AAE02456;
                                                                                                               Sequence
                                                                                                                                                                                                                                                                    RESULT 14
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The present invention relates to use of mechano-growth factor (MGF),

an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a
medicament for the treatment of neurological disorder. The MGF is capable

of reducing motoneurone loss by 20% or greater in response to nerve

avulsion, and effects motoneurone rescue, preferably adult motoneurone

caveling and selects motoneurone rescue, preferably adult motoneurone

can manufacture of a medicament for the treatment of a neurological disorder,

including a disorder of motoneurones and/or neurodegenerative disorder,

consular anyotrophic lateral sclerosis, spinal muscular atrophy,

poliomypelitis or post-polio syndrome, a disorder caused by exposure to a

consular atrophy, infantile or juvenile muscular atrophy,

consular atrophy, infantile or juvenile muscular atrophy,

consular atrophy, infantile or juvenile muscular atrophy,

containing that affects motoneurones, motoneurone loss associated with aging,

autosomal or sex-linked muscular dystrophy, diabetic neuropathy,

contoneurone transmers, alternative version of rabbit liver-type IGF-I

consoded by nucleic acid sequence is stated as being the same as SEQ ID NO:14

shown in sequence listing (AAE02452) of the specification. However
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GPQTLCGAQLVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The goat IGF precursor is useful for the preparation of IGF-1 which is used for growth of bone and the therapy of tumours. The IGF-1 precursor is prepared by inserting the coding sequence into an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Goat insulin-like growth factor I - useful for prepn. of insulin-like growth factor I used for growth of bone and tumour
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 459; DB 22;
Pred. No. 5.4e-40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Insulin; growth factor; bone; tumour therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              86
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 76.8%;
Best Local Similarity 96.5%;
Matches 83; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        it differs at few positions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              91JP-0347820
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     105 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-PSDB; AAQ47804.
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expression vector, transforming a host cell with the expression vector, culturing the transformed cell and retrieving the IGF-1 precursor from the culture supernatant.
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Sequence 154 AA;

Query Match 76.8%; Score 459; DB 14; Length 154; Best Local Similarity 97.7%; Pred. No. 8.2e-40; Matches 84; Conservative 0; Mismatches 2; Indels (

; 0 0; Gaps

Search completed: October 25, 2002, 15:57:09 Job time: 27.1807 secs

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Sequence 28, Appl Sequence 12, Appl Sequence 12, Appl Sequence 12, Appl Sequence 12, Appl Sequence 28, Appl Sequence 8, Appl Sequence 8, Appl Sequence 9, Appl Sequence 39, Appl Sequence 39, Appl Sequence 39, Appl Sequence 39, Appl Sequence 18, Appl Sequence 18, Appl Sequence 18, Appl Sequence 12, Appl Sequence 12, Appl

Seguence 2,

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1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 4, Application US/09142583A
Patent No. 6221842
GENERAL INFORMATION:
APPLICANT GOLDSPINK, GEOFFREY
ATTLE OF INVENTION: METHOD OF TREATING MUSCULAR DISORDERS
NUMBER OF SEQUENCES: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

FILING DATE: 29-Oct-1998

CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 572.5; DB 4;
Pred. No. 1.3e-60;
1; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO PCT/GB97/00658
FILING DATE: 11-MAR-1997
APPLICATION NUMBER: GB 9605124.8
FILING DATE: 11-MAR-1996
ATTORNEY/AGENT INFORMATION:
NAME: SADOFF, B. J.
REGISTRATION NUMBER: 36663
US-07-989-845-28
US-07-989-844-12
US-08-161-044-12
US-08-240-121-12
PCT-US93-11298-28
PCT-US93-11298-28
US-09-029-267-14
US-08-465-397-8
US-08-989-251-39
US-09-528-108
US-09-528-108
US-09-528-108
US-09-528-108
US-09-31-585A-12
5470828-1
                                                                                                                                                                                                                                                                                                                                         US-07-654-611-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: NIXON & VANDERHYE P.C.
STREET: 1100 NORTH GLEBE ROAD
CITY: ARLINGTON
STATE: VA
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                     ALIGNMENTS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION:
TELEPHONE: 7038164000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 121 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: 7038164100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO: 4: SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 95.7%;
Best Local Similarity 96.4%;
Matches 107; Conservative
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MOLECULE TYPE: protein ;
SEQUENCE DESCRIPTION: S
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    US-09-142-583A-4
      RESULT 1
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                                                                                                                                        ; Search time 9.93976 Seconds (without alignments) 270.310 Million cell updates/sec
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Sequence 9, A
Sequence 1, A
                                                                                                                                                                                                                                                         1 GPETLCGAELVDALQFVCGD.....STNKNTKSQRRKGSTFEEHK 110
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Sequence 41,
Sequence 47,
Sequence 47,
Sequence 47,
Sequence 47,
Sequence 17,
Sequence 11,
Sequence 17,
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Sequence 11
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/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
                      5.1.3
Compugen Ltd.
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US-08-989-251-41

US-09-528-108-41

US-09-528-108-41

US-08-460-890A-47

US-08-460-971A-47

US-08-460-971A-47

US-08-462-040-47

US-07-947-035-11

US-07-776-272-17
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US-08-219-878A-1
PCT-US93-04329-1
US-09-142-583A-11
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PCT-US92-09443A-1
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PCT-US95-08925-1
                                                                                                                                                                                                                                                                                                                                                            231628 seqs, 24425594 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUMMARIES
                          GenCore version
Copyright (c) 1993 - 2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                    OM protein - protein search, using sw model
                                                                                                                                            2002, 15:55:52
                                                                                                                                                                                                                                                                                                  BLOSUM62
Gapop 10.0 , Gapext 0.5
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                                                                                                                                                                                                                                                                                                                                                                                                                                        length: 0
length: 2000000000
                                                                                                                                                                                                            US-09-852-261-2
598
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                            October 25,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query
Match
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Maximum DB
                                                                                                                                                                                                                                                                 Sequence:
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                                                                                                                                            Run on:
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No.
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RESULT 3
US-08-950-720A-9
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11 GPETLCGAELVDALQFVCGDRGFYFNRPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       33 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 92
                                                                 61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQ-RRKGSTFEEHK 110
                                                                                           78.3%; Score 468; DB 1; Length 137; 100.0%; Pred. No. 3.7e-48; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                 APPLICANT: CHEN, Thomas T
APPLICANT: CHEN, Thomas T
APPLICANT: SHAMBLOTT, Michael J
TITLE OF INVENTION: INSULIN-LIKE GROWTH FACTORS ISOLATED
TITLE OF INVENTION: FROM RAINBOW TROUT
NUMBER OF SEQUENCES: 12
CORRESPONDENCE ADDRESS:
ADDRESSEE: Burns, Doane, Swecker & Mathis
STREET: George Mason Bldg., Washington & Prince Sts.
CITY: Alexandria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STATE: Virginia
COUNTRY: United States
ZIP: 22313-1404
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMpatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/953,230A
FILING DATE: 30-SEP-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; OTHER INFORMATION: /note= "Gap of 27 after 116.
US-07-953-230A-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "Gap of 2 after 7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "Gap of 1 after 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY AGENT INFORMATION:
NAME: Crane-Feury, Sharon E
REGISTRATION NUMBER: 36,113
REFERENCE/DOCKET NUMBER: 028755-010
TELECOMUNICATION INFORMATION:
TELEPHONE: (703) 836-6620
TELEFAX: (703) 836-2021
INFORMATION FOR SEQ ID NO: 10:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              93 CAPLKPAKSARSVRAQRHTDMPKTQK 118
                                                                                                                                                                                                   US-07-953-230A-10; Sequence 10, Application US/07953230A; Patent No. 5476779; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 137 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best_Local Similarity 100.
Matches 86; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: Peptide
LOCATION: 31
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCATION: 7 OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: Peptide
LOCATION: 116
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 3(CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23 GPETLCGAELVDALQEVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 82
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Patent No. 5473054
GENERAL INFORMATION:
APPLICANT: Bradford A. Jameson and Renato Baserga
TITLE OF INVENTION: IGF-1 Analogs
NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. 4.2e-48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 78.3%; Score 468; DB 3; Best Local Similarity 100.0%; Pred. No. 4.2e-48 Matches 86; Conservative 0; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Woodcock Washburn
Kurtz Mackiewicz & No. 5473054ris
                                                                                                                                                                                                                                                                                                                                                                                                                                          OPERATING SYSTEM: DOS SOFTWARE: PSEKSED OF Windows Version 2.0 SUGRENT APPLICATION DATA: APPLICATION NUMBER: US/08/950,720A
Sequence 9, Application US/08950720A
Patent No. 6046028
GENERAL INFORMATION:
APPLICANT: Conklin, Darrell C.
APPLICANT: Lofton Day, Catherine E.
APPLICANT: Lok, Si
APPLICANT: Lok, Si
APPLICANT: Jospers, Stephen R.
TITLE OF INVENTION: INSULIN HOMOLOG
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                 ADDRESSEE: ZymoGenetics, Inc.
STREET: 1201 Bastlake Avenue East
CITY: Seattle
STATE: WA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 CAPLKPAKSARSVRAORHIDMPKTOK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: SAVISIAK, DEBOTAH A
REGISTRATION NUMBER: 37,438
REFERENCE/DOCKET NUMBER: 96
TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-442-6672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 No. 6046028e
                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM Compatible OPERATING SYSTEM: DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 152 amino acids
TYPE: .amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION
                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: 206-442-6678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS
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APPLICATION NUMBER:
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                            USA
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                                                                                                                                                                                                                                                                                                                                               98102
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ADDRESSEE:
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Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 11, Application US/09142583A
Patent NO. 6221842
GENERAL INFORMATION:
APPLICANT: GOLDSPINK, GEOFFREY
TITLE OF INVENTION: METHOD OF TREATING MUSCULAR DISORDERS
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 156;
                                                                                                                                                                                                                      Length 153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: PatentIn Release #1:0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              78.3%; Score 468; DB 5; 1 ilarity 100.0%; Pred. No. 4.2e-48; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          78.3%; Score 468; DB 4; 100.0%; Pred. No. 4.3e-48; tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: NIXON & VANDERHYE P.C. STREET: 1100 NORTH GLEBE ROAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER: 117-263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 11:
US-09-142-583A-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: SADOFF, B. J.
REGISTRATION NUMBER: 36663
                                                                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION:
33,229
             REFERENCE/DOCKET NUMBER: TJ
TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3100
TELEFAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEPHONE: 703816400 TELEFAX: 7038164100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION FOR SEQ ID NO: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZIP: 22201
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 78.3
Best Local Similarity 100.
Matches 86; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: ARLINGTON
REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: USA
                                                                                                                                                  TYPE: AMINO ACID
                                                                                                                                                                                                                                      Best_Local Similarity
Matches 86; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STATE: VA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-142-583A-11
                                                                                                                                                                  TOPOLOGY:
                                                                                                                                                                                     PCT-US93-04329-1
                                                                                                                                LENGTH:
                                                                                                                                                                                                                        Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM: MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
                                                                                                       E: DISKETTE, 3.5 INCH, 1.44 Mb STORAGE IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Bradford A. Jameson and Renato Baserga
TITLE OF INVENTION: IGF-1 Analogs
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1; I
4.2e-48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      78.3%; Sco...
100.0%; Pred. No. ...
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Woodcock Washburn
ADDRESSEE: Kurtz Mackiewicz & Norris
STREET: One Liberty Place - 46th Floor
CITY: Philadelphia
STATE: PA
One Liberty Place - 46th Floor
                                                                                                                                                                             CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/219,878A
FILING DATE: 30-MAR-1994
CLASSIFICATION 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/881,524
FILING DATE: 08-MAY-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: PCT/US93/04329
FILING DATE: 19930507
                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER: TJU-1240
TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3439
TELEFAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        109 CAPLKPAKSARSVRAQRHTDMPKTQK 134
                                                                                                                                                OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   equence 1, Application PC/TUS9304329 GENERAL INFORMATION:
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PRIOR APPLICATION DATA:
PRELICATION NUMBER:
FILING DATE: 08-MAY-92,
ATTORNEY/AGENT INFORMATION:
NAME: Mark DeLuca
                                                                                                                                                                                                                                                                                                                                NAME: Mark DeLuca
REGISTRATION NUMBER: 33,229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PS/2
OPERATING SYSTEM: PC-DOS
SOFTWARE: WORDPERFECT 5.0
CURRENT APPLICATION DATA:
                                                                                                                                                                  WORDPERFECT 5.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 78.3
Best Local Similarity 100.
Matches 86; Conservative
                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: DISKETT
                 Philadelphia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY: US
ZIP: 19103
                                                                      19103
                                                                                                                                                                     SOFTWARE:
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PCT-US93-04329-1
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61 CAPLKPAKSA-RSVRAQRHTDMPKTQK 86
INFORMATION FOR SEQ ID NO:
                                                                               , MOLECULE TYPE:
US-08-989-251-41
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: US
                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                         US-09-340-250-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE:
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                              LENGTH:
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STATE:
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                                                                                                                                      Query Match
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                                                   TYPE:
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Matches
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                        1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDHRRLEMY 74
       1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
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Pred. No. 2.1e-47;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 41, Application US/08989251
Patent No. 6017731
GENERAL INFORMATION:
APPLICANT: Tekamp-Olson, Patricia
TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
TITLE OF INVENTION: PROTEINS IN YEAST
NUMBER OF SEQUENCES: 41
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                             ;Patent No. 5405942
; APPLICANT: BELL, GRAEME I.;RALL, LESLIE B.;MERRYWEATHER,
                                                                                                                                                                                                                                                TITLE OF INVENTION: PREPRO INSULIN-LIKE GROWTH FACTORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SSEE: Bell Seltzer IP Group of Alston & Bird, 1: 3605 Glenwood Ave. Suite 310 Raleigh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/989,251
                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 16
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/65,673
FILING DATE: 16-JUN-1987
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 630,557
FILING DATE: 19-JUL-1984
                                                                                               61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READMBLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: 5784-4
TELECOMMUNICATION:
TELEPHONE: 919 420 2202
TELEFAX: 919 881 3175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: Spruill, W. Murray
REGISTRATION NUMBER: 32,943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      77.1%;
98.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 77.1
Best Local Similarity 98.8
Matches 85; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO:1:
LENGTH: 119
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US-08-989-251-41
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CITY: Ra
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                Length 191;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 191;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Tekamp-Olson, Patricia
TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
TITLE OF INVENTION: PROTEINS IN YEAST
NUMBER OF SEQUENCES: 41
CORRESPONDENCE ADDRESS:
                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
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                                                                                                                                DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 457.5; DB 3;
Pred. No. 9.7e-47;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: Bell Seltzer IP Group of Alston & STREET: 3605 Glenwood Ave. Suite 310
                                                                                                                              Score 457.5; DB 3
Pred. No. 9.7e-47;
0; Mismatches 0
                                                                                                                                                                                                                                                                                                    146 CAPLKPAKSAKRSVRAQRHTDMPKTQK 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/340,250
                                                                                                                                                                                                                                                                               61 CAPLKPAKSA-RSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 41, Application US/09340250 Patent No. 6083723 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/989,251
FILING DATE:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Spruill, W. Murray
REGISTRATION NUMBER: 32,943
REFERENCE/DOCKET NUMBER: 576
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919,420,2202
                                                                                                                              76.5%;
98.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   76.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Floppy disk
               : 191 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          : 191 amino acids
amino acid
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                          protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; MOLECULE TYPE: protein US-09-340-250-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OPERATING SYSTEM:
                                                          linear
                                                                                                                                            Best Local Similarity
Matches 86; Conserv
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nes 86; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION:
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4 TLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAP 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 TLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAP 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 47, Application US/08167641C
Patent No. 6033884
GENERAL INFORMATION:
APPLICANT: Woo, Savio L.C.
APPLICANT: Maith, Louis C.
APPLICANT: Gristiano, Richard J.
APPLICANT: Gottchark, Stephen
TITLE OF INVENTION: MUCLEIC ACID TRANSPORTER SYSTEMS AND
TITLE OF INVENTION: METHODS OF USE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 412; DB 2,
Pred. No. 8e-42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2; Mismatches
                                                                                                                                                                                                        COMPUTER: IBM Compatible
COMPUTER: IBM Compatible
COMPUTER: FastSEG for Windows 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/460,890A
FILING DATE: June 5, 1995
CLASSIFICATION DATA:
APPLICATION NUMBER: 08/167,641
FILING DATE: December 14, 1993
APPLICATION NUMBER: 07/855,389
FILING DATE: March 20, 1992
APPLICATION NUMBER: 07/855,389
FILING DATE: March 20, 1993
ATTORNEY AGENT INFORMATION:
                                                                                                     COUNTRY: U.S.A.
ZIP: 90071-2066
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
STREET: Suite 4700
ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
STREET: Suite 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: 21
TELECOMMUNICATION INFORMATION:
TELEPHONE: (213) 489-1600
TELEFAX: (213) 955-0440
TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 47:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   32,327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               68.9%;
97.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Warburg, Richard J. REGISTRATION NUMBER: 32,3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 78 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     64 LKPAKSARSVRAQRHTD 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; MOLECULE TYPE: peptide US-08-460-890A-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
                                                               CITY: Los Angeles
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: Los Angeles
STATE: California
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best_Local Similarity
Matches 75; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          76.5%; Score 457.5; DB 4; Length 191; 98.9%; Pred. No. 9.7e-47; tive 0; Mismatches 0; Indels 1;
                                                                                                                                                                                      APPLICANT: Tekamp-Olson, Patricia
TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
TITLE OF INVENTION: PROTEINS IN YEAST
CORRESPONDENCES: 41
CORRESPONDENCE ADDRESS:
ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP
STREET: 3605 Glenwood Ave. Suite 310
CITY: Raleigh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 47, Application US/08460890A
Patent No. 5994109
GENERAL INFORMATION:
APPLICANT: Woo, Savio L.C.
APPLICANT: Smith, Louis C.
APPLICANT: Smith, Louis C.
APPLICANT: Gottchalk, Stephen
TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS AND
TITLE OF INVENTION: METHODS OF USE
NUMBER OF SEQUENCES: 65
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/528,108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            146 CAPLKPAKSAKRSVRAQRHTDMPKTQK 172
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/989,251
APTORNEY/AGENT INFORMATION:
NAME: Spruill, W. Murray
REGISTRATION NUMBER: 32,943
REFERENCE/DOCKET NUMBER: 5784-4
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 CAPLKPAKSA-RSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PC-DOS/MS-DOS
                                                                                                                       Sequence 41, Application US/09528108 Patent No. 6312923
                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO: 41: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               : 191 amino acids
amino acid
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Matches 86; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           919 881
                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY: UZIP: 27622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 11
US-08-460-890A-47
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                09-528-108-41
                                                                                                         US-09-528-108-41
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                                                                                   RESULT 10
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DB 2; Length 78; ó;

90071-2066

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4 TLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAP 63
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 77, Application US/08462040
Patent No. 6177554
GENERAL INFORMATION:
APPLICANT: With, Louis C.
APPLICANT: Smith, Louis C.
APPLICANT: Cristiano, Richard J.
APPLICANT: Gottchalk, Stephen
TITLE OF INVENTION: MUCLEIC ACID TRANSPORTER SYSTEMS AND
TITLE OF INVENTION: METHODS OF USE
NUMBER OF SEQUENCES: 65
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 4; Length 78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ouery Match 68.9%; Score 412; DB 4 Best Local Similarity 97.4%; Pred. No. 8e-42; Matches 75; Conservative 2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2; Mismatches
APPLICATION NUMBER: US/08/460,971A
FILING DATE: June 5, 1995
CLASSIFICATION: 435
PRIOR APPLICATION ATA:
APPLICATION NUMBER: 08/167,641
FILING DATE: December 14, 1993
APPLICATION NUMBER: 07/865,389
FILING DATE: MARCH 20, 1992
APPLICATION NUMBER: PCT/US93/02725
FILING DATE: MARCH 19, 1993
ATTORNEY/AGENT INRORMATION:
RAFERENCE/DOCKET NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 31,327
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEFAX: (213) 469-1600
TELEFAX: (7-3510
INFORMATION FOR SEG ID NO: 47:
SEQUENCE CHARACTERISTICS:
LENGTH: 78 anino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: FastSEQ for Windows 2.0
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/08/462,040
FILING DATE: June 5, 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/167,641
FILING DATE: December 14, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE: Lyon & Lyon STREET: 633 West Fifth Street STREET: Suite 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64 LKPAKSARSVRAQRHTD 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: Los Angeles
STATE: California
COUNTRY: U.S.A.
ZIP: 90071-2066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: amino acid
STRANDEDNESS: si
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-460-971A-47
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 TLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAP 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 3; Length 78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Woo, Savio L.C.
APPLICANT: Whith, Louis C.
APPLICANT: Cristiano, Richard J.
APPLICANT: Cristiano, Richard J.
APPLICANT: Gritchalk, Stephen
TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS AND
TITLE OF INVENTION: METHODS OF USE
CORRESPONDENCE ADDRESS:
65
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2; Mismatches
                                                                                                                                                                                                                                    CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/855,389
FILING DATE: March 20, 1992
APPLICATION NUMBER: PCT/US93/02725
FILING DATE: March 19, 1993
ATTORNEY/AGENT INFORMATION:
NAME: Warburg, Richard J.
REGISTRATION NUMBER: 205/012
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION OF TELEFAX: (213) 489-1600
TELEFAX: (213) 489-1600
TELEFAX: (213) 955-0440
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
                                              MEDIUM TYPE: 3.5" Diskette, 1.44 Mb MEDIUM TYPE: storage COMPUTER: IBM Compatible OPERATING SYSTEM: IBM P.C. DOS 5.0 SOFTWARE: FastSEQ for Windows 2.0 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 MD
MEDIUM TYPE: storage
                                                                                                                                                                                           APPLICATION NUMBER: US/08/167,641C
FILING DATE: December 14, 1993
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OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: FastSEQ for Windows 2.0
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 47, Application US/08460971A; Patent No. 6150168
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
STREET: Suite 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ouery Match 68.99
Best Local Similarity 97.49
Matches 75; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      single
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STATE: California
COUNTRY: U.S.A.
ZIP: 90071-2066
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 TLGGAELVDALQFYCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAP 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
APPLICANT: CHEN, Thomas T
APPLICANT: CHEN, Thomas T
TITLE OF INVENTION: INSULINFLIKE GROWTH FACTORS ISOLATED
TITLE OF INVENTION: ROWNING TROUT
NUMBER OF SEQUENCES: 12
CORRESPONDENCE ADDRESS:
ADDRESSEE: Burns, Doane, Swecker & Mathis
STREET: George Mason Bldg., Washington & Prince Sts.
CITY: Alexandria
STATE: Virginia
COUNTRY: United States
IP: 22313-1404
COMPUTER: EDAPPE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
COMPUTER: DATE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION DATE: 30-SEP-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 4; Length 78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 68.9%; Score 412; DB 4;
Best Local Similarity 97.4%; Pred. No. 8e-42;
Matches 75; Conservative 2; Mismatches
                                                                                                               MAME: Warburg, Richard J.
REGISTRATION NUMBER: 32,327
REPERCNEC/DOCKET VUMBER: 212/078
TELEPHONE: (213) 489-1600
TELEPA: (213) 489-1600
TELERA: (213) 955-0440
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
LENGTH: 78 amino acids
TYPE: amino acid
STRANDEDNESS: single
FILING DATE: March 20, 1992
APPLICATION NUMBER: PCT/US93/02725
FILING DATE: March 19, 1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 9, Application US/07953230A
Patent No. 5476779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Crane-Feury, Sharon E
REGISTRATION NUMBER: 36,113
REPERENCE/DOCKET NUMBER: 02875
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEPHONE: (703) 836-6620
TELEFAX: (703) 836-2021
INFORMATION FOR SEQ ID NO: 9:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 176 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        64 LKPAKSARSVRAQRHTD 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-462-040-47
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GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd
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OM protein - protein search, using sw model

October 25, Run on:

2002, 15:55:02; Search time 12.5904 Seconds (without alignments) 839.517 Million cell updates/sec

US-09-852-261-2

Perfect score:

598 1 GPETLCGAELVDALQFVCGD.....STNKNTKSQRRKGSTFEEHK 110 Sequence:

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

283138 seqs, 96089334 residues rched:

283138 Total number of hits satisfying chosen parameters:

length: 0 length: 2000000000 Minimum DB seq Maximum DB seq

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database

PIR_71:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	insulin-like growt	insulin-like growt	in-like	insulin-like growt	insulin-like growt	insulin-like growt	-1	insulin-like growt	-like	insulin-like growt	insulin-like growt	insulin-like growt	insulin-like growt	-like	-like	in-like	insulin-like growt	insulin-like growt	insulin-like growt	insulin-like growt			in-like	insulin-like growt					
SUMMARIES	QI	IGHUIB	A26859	A40912	A27804	IGGP1	A36552	IGHU1	S12825	PN0622	IGB01	JC2483	S22878	A33390	B27804	A25540	B40912	A41399	A36079	C54270	C44012	A41396	A54270	B54270	D54270	624	566485	369	-	83
	BB	1	7	7	7	Н	7	7	7	7	7	~	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	Query Match Length							153			153	154	138	154	153	127	127	153	153	161	155	176	188	188	149	176	126	193	214	187
æ	Query	93.6	87.2	84.2	82.6	78.3	78.3	78.3	77.7	77.4	77.4	76.8	76.1	76.1	75.3	74.7	72.2	9.07	70.2	67.5	67.1	67.1	67.1				49.9			
	Score	260	521.5	503.5	464	468	468	468	464.5	463	463	459	455	455	450	447	432	422	-	403.5	401	401	401	401	399	398	298.5	293	264.5	248.5
	Result No.	П	7	e	7	S	9	7	&	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29

insulin-like growt insulin-like growt		insulin-like growt insulin-like growt	insulin-like growt insulin-like growt	insulin-like growt insulin-like growt insulin-like growt	insulin-like growt insulin-like growt insulin - shorthor
S04858 IS7671	IGBO2 A24913 IGHU2	IGRT2 I53642	502423 A38612	167610 151240 S66484	A60740 A34049 INFIS
22.	121	- 2 0	0 0 0	~ ~ ~	777
179	155 180 180	180	183 133	183 79 210	66 44 50
40.3 39.3	39.3 38.6	38.4	37.7	36.7 35.5 34.6	33.4 29.8 26.7
241	235 233 231	229.5	225.5 219.5	219.5 212.5 207	200 178 159.5
30	337 3437	36 36 7	, 88 Q 3 R R	4 4 4 4 2 1 2	4 4 4 5 4 5

ALIGNMENTS

	[validated] - human
	form B
	splice
	I precursor, somatomedin (
JT 1	insulin-like growth factor I precursor, splice form B [validated] - human v_i Alternate names: IGF-IB; somatomedin C
RESULT 1 IGHU1B	insu. N;Alt

N; Contains: insulin-like growth factor IB-El amide

C;Species: Homo sapiens (man) C;Date: 30-Jun-1987 *sequence_revision 30-Jun-1987 *text_change 31-Dec-2000 C;Accession: A01161; A26181; S30540; B48960; A42664 R;Rotwein, P.; Pollock, K.M.; Didier, D.K.; Krivi, G.G. J. Biol. Chem. 261, A818-4832, 1986 A;Title: Organization and sequence of the human insulin-like growth factor I gene. Al A;Reference number: A92581; MUID:861668194

A; Accession: A01611

A; Molecule type: DNA
A; Residues: 1-195 <ROTI>
A; Residues: 1-195 <ROTI>
A; Residues: 1-195 <ROTI>
Cross-references: GB:M14155; NID:g183106; PIDN:AAA52537.1; PID:g183109
B; Rotwein, P.
Proc. Natl. Acad. Sci. U.S.A. 83, 77-81, 1986
A; Title: Two insulin-like growth factor I messenger RNAs are expressed in human liver A; Reference number: A26181; MUID:86094355
A; Accession: A26181

A; Molecule Lype: mRNA A; Residues: 1-195 <ROT2> A; Cross-references: GB:M11569; NID:g183111; PIDN:AAA52539.1; PID:g183112 A; Cross-references: GB:M11569; NID:g183111; PIDN:AAA52539.1; PID:g183112 R; Sandberg Nordqvist, A.C.; Stahlbom, P.A.; Lake, M.; Sara, V.R. submitted to the EMBL Data Library, November 1990 A; Description: Nucleotide sequence of the human fetal brain IGF-1b. A; Reference number: \$30540 A; Accession: \$30540

Risandberg Nordqvist, A.C.; Stahlbon, P.A.; Reinecke, M.; Collins, V.P.; von Holst, H. Cancer Res. 53, 2475-2478, 1993
A;Title: Characterization of insulin-like growth factor 1 in human primary brain tumo A; Reference number: A48960; MUID:93265440
A;Accession: B48960
A;Accession: B48960
A;Accession: B48960
A;Residues: 1-195
A;Cross-references: GB:X56774; GB:S51860; NID:g32991; PIDN:CAA40093.1; PID:g32992 A; Molecule type: mRNA A; Residues: 1-195 <SAN> A; Cross-references: EMBL: X56774; NID: 932991; PIDN: CAA40093.1; PID: 932992

A) Experimental source: anaplastic oligodendroglioma
A, Note: sequence modified after extraction from NCBI backbone
A, Note: the authors translated the codon CAG for residues 124 and 133 as Glu
A, Note: sequence extracted from NCBI backbone (NCBIN:133058)
B, Siegfried, J.M.; Rasprzyk, P.G.; Treston, A.M.; Mulshine, J.L.; Quinn, K.A.; Cuttit
Proc. Natl. Acad. Sci. U.S.A. 89, 8107-8111, 1992
A; Title: A mitogenic peptide amide encoded within the E peptide domain of the insulin

A;Reference number: A42664; MUID:92390398 A;Contents: annotation; IBE-1; amidated carboxyl end C;Comment: For an alternative splice form, see PIR:IGHU1.

C;Genetics: A;Gene: GDB:IGF1

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Gaps

1;

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AZ/800

AZ/801

C; Species: Rattus norvegicus (Norway rat)

C; Date: 09-Jun-1988 #text_change 16-Jul-1999

C; Date: 09-Jun-1988 #sequence_revision 09-Jun-1988 #text_change 16-Jul-1999

C; Accession: AZ/804; IG5202

R; Shimatsu, A.; Rotwein, P.

J. Biol. Chem. 262, 7894-7900, 1987

A; Title: Mosaic evolution of the insulin-like growth factors. Organization, sequence, A; Reference number: AZ/804; MUID:8722423

A; Title: Mosaic evolution of the insulin-like growth factors. Organization, sequence, A; Reference number: AZ/804; MUID:8722423

A; Title: Mosaic evolution of the insulin-like growth factors. Organization, sequence, A; Reference number: AZ/804; MUID:8722423

A; Scatus: Preliminary

A; Molecule type: DNA

A; Reference number: IS2218; MUID:8728855

A; A; Attue: Preliminary; translated from GB/EMBL/DDBJ

A; Molecule type: mRNA

A; Residues: 1-27 <RES>

A; Cross-references: GB:MIJ594; NID:9204759; PIDN:AAA41390.1; PID:9204760

C; Superfamily: insulin

C; Keywords: alternative splicing
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C;Species: Cavia porcellus (ginea pig)
C;Date: 30-5ep-1991 #sequence_revision 30-5ep-1991 #text_change 07-Nov-1997
C;Accession: S12719
R;Bell, G.I.; Stempien, M.M.; Fong, N.M.; Seino, S.
Nucleic Acids Res, 18, 4275, 1990
A;Title: Sequence of a clona encoding quinea pig IGF-I.
A;Réference number: S12719, MUID:90332447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              49 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                           1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                           A;Cross-references: GB:M15480; NID:g204749; PIDN:AAA41385.1; PID:g204750 C;Superfamily: insulin
                                                                                                                                                  Length 133;
                                                                                                                                                                                                                                                                                                                                                                             61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQ-RRKGSTFEEHK 110
                                                                                                                                                                                                                                                                                                                                                                                                        Length 181;
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                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                            Score 503.5; DB 2;
Pred. No. 2.5e-45;
2; Mismatches 12;
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Pred. No. 3.3e-44;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           82.6%;
84.4%;
                                                                                                                                            Query Match
Best Local Similarity 86.5%;
Matches 96; Conservative
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Matches 92; Conservative
                                1-133 <ROB>
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A; Molecule type: mRNA
A; Residues: 1-137 <BEL>
     A; Molecule type: mRNA
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                                   A; Residues:
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              A.Map position: 12422-12424...
A.Map position: 12422-12424...
A.Martons: 21/3; 74/1; 134/3
A.Martons: 21/3; 74/1; 134/3
A.Martons: 21/3; 74/1; 134/3
A.Martons: 21/3; 74/1; 134/3
A.Martons: 21/2; 74/1; 134/3
C.Seperfamily: insulin
C.Seperfamily: insulin
C.Seperfamily: insulin bropeptide *status predicted <SIG>*
F.2-48/Domain: insulin connecting C peptide-118/E *status predicted <CHB>*
F.49-77/Domain: insulin connecting C peptide-118/E *status predicted <CHB>*
F.79-110/Domain: insulin connecting C peptide-118/E *status predicted <CHA>*
F.111-118/Domain: insulin chain A-like *status predicted <CHA>*
F.111-118/Domain: insulin chain A-like #status predicted <CHA>*
F.111-118/Domain: carboxyl-terminal propeptide (E peptide) *status predicted <MA>*
F.111-118/Domain: carboxyl-terminal propeptide (E peptide) *status predicted <MA>*
F.115-1172/Product: insulin-like growth factor IB-El amide *status predicted <MA>*
F.54-96,66-109,95-100/Disulfide bonds: *status predicted
F.172/Modified site: amidated carboxyl end (Arg) (amide in mature form following gl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NID:956424; PIDN:CAA29480.1; PID:95
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R;Roberts Jr., C.T.; Lasky, S.R.; Lowe Jr., W.L.; Seaman, W.T.; LeRoith, D.
Mol. Endocrinol. 1, 243-248, 1987
A;Title: Molecular cloning of rat insulin-like growth factor I complementary deoxyribonu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'n
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C;Species: Rattus norvegicus (Norway rat)
C;Date: 19-Nov-1988 #sequence_revision 19-Nov-1988 #text_change 16-Jul-1999
C;Accession: A26859
R;Shimatsu, A.; Rotwein, P.
Nucleic Acids Res. 15, 7196, 1987
A:Title: Sequence of two rat insulin-like growth factor I mRNAs differing within the P.
A:Reference number: A26859; MUID:88015572
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C;Date: 28-Feb-1992 #sequence_revision 28-Feb-1992 #text_change 16-Jul-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      49 GPETLCGAELVDALQEVCGDRGFYENRPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              49 GPETLCGAELVDALQEVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 108
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 1; Length 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
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Pred. No. 3.9e-47;
2; Mismatches 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 560; DB 1; Pred. No. 4.6e-51;
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Matches 103; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2; Mismatches
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GDB:120081; OMIM:147440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     c tissues.
Areference number: A40912; MUID:88288198
A;Accession: A40912
A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           87.2%;
89.2%;
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Matches 99; Conserv
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A; Title: Complete characterization of the human IGF-I nucleotide sequence isolated fracession: A23622; MUID:86108910
A; Reference number: A23622; MUID:86108910
A; Reference number: A23622; MUID:86108910
A; Molecule type: MRNA
A; Residues: 1-153 < LEB>
A; Residues: 1-153 < LEB>
A; Cross-references: GB:M27544; NID:9184829; PIDN:AAA52787.1; PID:9306927
B; Rinderknecht, E.; Humbel, R.E.
J. Biol. Chem. 253, 2769-2776, 1978
A; Title: The amino acid sequence of human insulin-like growth factor I and its struct A; Reference number: A92226; MUID:78130171
A; Accession: A92226
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R;Sandberg-Nordqvist, A.C.; Stahlbom, P.A.; Reinecke, M.; Collins, V.P.; von Holst, H Cancer Res. 53, 2475-2478, 1993
A;Title: Characterization of insulin-like growth factor 1 in human primary brain tumo A;Reference number: A48960; MUID:93265440
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Note: Met-24 is proposed as a likely initiator R; Steenbergh, P.H.; Koonen-Reemst, A.M.C.B.; Cleutjens, C.B.J.M.; Sussenbach, J.S. Biochem. Biophys. Res. Commun. 175, 507-514, 1991 A; Fitle: Complete nucleotide sequence of the high molecular weight human IGF-I mRNA. A; Reference number: JT0571; WUID:91207342
                                                                                                                                           A;Cross-references: GB:X03420; GB:X00362; NID:g33020; PIDN:CAA27152.1; PID:g33021; R;Jansen, M.: van Schaik, F.M.A.; Ricker, A.T.; Bullock, B.; Woods, D.E.; Gabbay, K Nature 306, 609-611, 1983
A;Title: Sequence of cDNA encoding human insulin-like growth factor I precursor. A;Reference number: A93321; MUID:84068210
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A;Note: sequence inconsistent with the nucleotide translation
B;Rall, L.B.; Scott, J.; Bell, G.I.
Meth. Enzymol. 146, 239-248, 1987
A;Title: Human insulin-like growth factor I and II messenger RNA: isolation of
A;Reference number: I57044; MUID:88065102
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A;Molecule type: mRNA
A;Residues: 24-153 <RAL>
A;Cross-references: GB:M29644; NID:g183119; PIDN:AAA52543.1; PID:g183120
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R;Le Bouc, Y.; Dreyer, D.; Jaeger, F.; Binoux, M.; Sondermeyer, P.
FEBS Lett. 196, 108-112, 1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Residues: 1-153 <JAN>
A;Cross-references: GB:X00173; NID:933015; PIDN:CAA24998.1; PID:933016
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A; Molecule type: protein
A; Residues: 49-53, X',55-65, X', 67-75 <KAR>
A; Experimental source: platelet lyses, M.; Sara, V.R.
Submitted to the EMBL Data Library, November 1990
A; Description: Nucleotide sequence of the human fetal brain IGF-la.
A; Reference number: $30519
A; Accession: $30519
A; Status: preliminary
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A Residues: 1-123, 'E',125-132,'E',134-153 <SAN>
A;Cross-references: GB:X56773; GB:S61841; NID:932985
A;Experimental source: anaplastic oligodendroglioma
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A; Residues: 49-118 <RIN>
R; Rarey, K.P.; Marquardt, H.; Sirbasku, D.A.
Blood 74, 1084-1092, 1989
A; Title: Human platelet-derived mitogens. Id
A; Reference number: A60483; MUID:89323462
                                                                                                      A; Residues: 24-153 <DEP>
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A; Residues: 1-153 <STE>
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A; Residues: 1-153 <NOR>
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                  A; Accession: A23614
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N;Alternate names: IGF-I long splice form precursor; IGF-IA; somatomedin C
C;Species: 167-I long splice form precursor; IGF-IA; somatomedin C
C;Date: 24-Apr-1984 #sequence_revision 30-Jun-1987 #text_change 31-Dec-2000
C;Date: 24-Apr-1984 #sequence_revision 30-Jun-1987 #text_change 31-Dec-2000
C;Accession: A95581; A2361; A93321; JT0571; A23622; A92226; A60483; S30519; A48960; I57
R;Rotwein, P: Pollock, K.M.; Didier, D.K.; Krivi, G.G.
J. Blol. Chem. 261, 4628-4832, 1986
A;Tille: Organization and sequence of the human insulin-like growth factor I gene. Alter A;Accession: A92581; MUID:86168194
A;Rotession: A92581
A;Molecule type: DNA
A;Residues: I-153 <ROT>
A;Cross-references: GB:M14156; NID:9183107; PIDN:AAA52538.1; PID:9183110
A;Cross-references: GB:M1456; NID:9183107; PIDN:AAA52538.1; PID:9183110
A;Altile: Organization of the human genes for insulin-like growth factors I and II.
A;Reference number: A91356; MUID:86108862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C; Decession: A3652
C; Accession: A3652
Mol. Endocrinol. 4, 1914-1920, 1990
A; Tubin, C and C an
C; Superfamily: insulin
C; Sequencia: glycoptotein; growth factor; plasma
C; Sequencia: glycoptotein; growth factor is described.
E; 3.102/Product: insulin-like growth factor I #status predicted <MAT>
F; 3.102/Product: insulin-like growth factor I #status predicted <MHD>
F; 3.102/Product: insulin chain B-like #status predicted <CHD>
F; 3.102/Promain: insulin connecting C peptide-like #status predicted <CHC>
F; 7.102/Domain: insulin chain A-like #status predicted <CHD>
F; 9.102/Domain: Deptide #status predicted <CHD>
F; 103-137/Domain: carbohydrate (Asn) (covalent) #status predicted
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C;Species: Homo sapiens (man)
C;Date: 12-Apr-1991 #sequence_revision 12-Apr-1991 #text_change 16-Jul-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;: Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
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Pred. No. 1.3e-41;
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100.0%; Pred. No. 1...
... 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
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Best Local Similarity 100.
Matches 86; Conservative
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Mes 86; Conservative
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us-09-852-261-2.rpr

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Nalternate names: 1GF-1; somatomedin C
C; Species: Bos primigenius taurus (cattle)
C; Dateies: Bos primigenius 212672; A25633; Soulder Sou
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R.Honegger, A.; Humbel, R.E.
J. Biol. Chem. 261, 569-575, 1986
A.Title: Insulin-like growth factors I and II in fetal and adult bovine serum. Purifi A;Reference number: A92585; MUID:86085881
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A;Molecule type: mRNA
A;Residues: 1-122 <DEL>
C;Comment: This protein is a potent inducer of DNA synthesis in multiple cell types,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               predicted <MAT>
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C;Date: 10-Mar-1994 #sequence_revision 10-Mar-1994 #text_change 07-May-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                           F;49-153/Product: insulin-like growth factor IA #status experimental <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
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R; Delafontaine, P.; Lou, H.; Harrison, D.G.; Bernstein, K.E.
Gene 130, 305-306, 1993
A; Title: Sequence of a cDNA encoding dog insulin-like growth factor
A; Reference number: PN0622; MUID:93366192
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C;Superfamily: insulin
C;Keywords: growth factor
F;20-89/Product: insulin-like growth factor Ia (fragment) #status
                                                                                                                                                                                                                                                                                                                                                                                                               Length 153;
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    bovine (fragment)

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                                                                                                                                                                                                                                                                                                                                                                                                                     3.3e-41;
5;
                                                                                                                                                                                                                                                                                                                                                                                                               DB 2;
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Pred. No. 3.9e-41;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 CAPLKPAKSARSVRAQRHTDMPKTQK-----YQPPSTNKN
                                                                                                                   C;Keywords: growth factor
F;1-22/Domain: signal sequence #status predicted <
F;23-48/Domain: propeptide #status predicted <PRO>
                                                                                                                                                                                                                                                                                                                                                                                                         77.7%; Score 464.5;
87.3%; Pred. No. 3.3e
live 1; Mismatches
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Best Local Similarity 98.8%;
Matches 85; Conservative
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Matches 89; Conservative
                                                                                 C; Superfamily: insulin
                       A; Introns: 21/3; 74/1
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C.Species: Sus scrofa domestica (domestic pig)
C.Species: Sus scrofa domestica (domestic pig)
C.Accession: 512825, $21488; A60738
C.Accession: 512825, $21488; A60738
C.Accession: 512825, $21488; A60738
C.Accession: 512825, MUD: 90221822
A.Reference number: 512825, MUD: 90221822
A.Rederence number: 512825, MUD: 90221822
A.Residues: 1:133 <AUE>
A.Residues: 1:134 <AUE>
A.Residues: 1:134 <AUE>
A.Residues: 1:134 <AUE>
A.Rosidues: 1:135 <AUE>
A.Rosidues: 1
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C;Comment: The insulin-like growth factors, isolated from plasma, are structurally and C;Comment: For an alternative splice form, see PIR:IGHU1B.
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R;Tavakkol, A.; Simmen, F.A.; Simmen, R.C.M.
Mol. Endocrinol. 2, 674-681, 1988
A;Title: Porcine insulin-like growth factor-I (pIGF-I): complementary deoxyribonucleic
                                                                                                                                                                                                                                                                    A.Map position: 12q22-12q24.1
A.Introns: 21/3; 74/1; 134/3
C.Superfamily: insulin
C.Keywords: alternative splicing; growth factor; plasma
C.Keywords: alternative splicing; growth factor plasma
F.1-21/Domain: signal sequence #status predicted <SIG>F.12-4B/Domain: propeptide #status predicted <PRO>F.22-4B/Domain: propeptide #status predicted <PRO>F.49-71/Domain: insulin-like #status experimental <CHD>F.49-77/Domain: insulin chain B-like #status experimental <CHD>F.49-11B/Domain: insulin chain B-like #status experimental <CHC>F.90-110/Domain: insulin chain A-like #status experimental <CHA>F.11-11B/Domain: ansulin chain B-like #status experimental <CHA>F.11-11B/Domain: arboxyl-terminal propeptide (E peptide) #status predicted <CPRO>F.119-153/Domain: carboxyl-terminal propeptide (E peptide) #status predicted
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A.Residues: YY.21-153 <TAV>
A.Cross-references: GB:M31175
A.Cross-references: GB:M31175
J. Endocrinol. 122, 681-687, 1989
A.Fitle: Purification, amino acid sequences and assay cross-reactivities of pA.Reference number: A60738; MUID:90039035
A.Reference number: A60738; MUID:90039035
A.Reference number: A60738
A.Reference number: CFRA>
C.C. CRAPA
A.Residues: 49-117, X' <FRA>
C.C. CRAPA
C.C. CRAP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  468; DB 1;
No. 1.4e-41;
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100.0%; Pred. No. 1...
0; Mismatches
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                                                                                                                                                                                                                                 GDB:120081; OMIM:147440
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 78.3'
Best Local Similarity 100.
Matches 86; Conservative
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A; Residues: 1-21 <DIC>
                                                                                                                                                                                                                                 A; Cross-references:
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                                                                                                                                                                             A; Gene: GDB: IGF1
                                                                                                                         C; Genetics:
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insulin-like growth factor I precursor, splice form 1 - sheep
NALternate names: somatomedin C
C; Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C; Species: 09-Mar-1990 Hsequence_revision 27-Feb-1997 #text_change 23-Jul-1999
C; Accession: S22877; A33390; S07965; S07198
R; Dickson, M.C.; Saunders, J.C.; Gilmour, R.S.
J. Mol. Endocrinol. 6, 17-31, 1991
A; Mol. Endocrinol. 6, 17-31, 1991
A; Title: The ovine insulin-like growth factor-I gene: characterization, expression an A; Reference number: S22877; MuID:91197361
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A; Residues: 1-43,'SS',46-154 <WON>
A; Cross-references: GB:M30653; NID:G165929; PIDN:AAA80532.1; PID:g165930
A; Cross-references: CB:M30653; NID:Grow, R.J.; Thorburn, G.D.
Biochim. Biophys. Acta 997, 27-35, 1989
A; Title: Simultaneous isolation of insulin-like growth factors I and II from adult sh
                 insulin-like growth factor I precursor, splice form 2 - sheep
C;Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C;Date: 23-Apr.1999 #sequence_revision 23-Apr.1999 #text_change 23-Jul-1999
C;Accession: S22878; S07198
R;Dickson, M.C.; Saunders, J.C.; Gilmour, R.S.
J. Mol. Endocrinol. 6, 17-31, 1991
A;Title: The ovine insulin-like growth factor-I gene: characterization, expression an A;Reference number: S22877; MUID:91197361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Residues: 1-138 <-DIC>
A; Cross-references: EMBL:X51358
A; Cross-references: EMBL:X51358
R; Francis, G.L.; McN0:1, K.A.; Wallace, J.C.; Ballard, F.J.; Owens, P.C.
Endocrinology 124, 1173-1183, 1989
A; Title: Sheep insulin-like growth factors I and II: sequences, activities and assays
A; Reference number: S07198; MUID:89136887
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Aintrons: 5/3; 59/1; 119/3
CSuperfamily: insulin
C;Keywords: alternative splicing, growth factor; plasma
C;Keywords: alternative splicing, growth factor plasma
C;Keywords: alternative splicing, growth factor insulin-like growth factor I (active) #status experimental <MAT>
F;74-103/Poroduct: insulin-like growth factor I (active) #status experimental <MAT>
F;34-103/Poroduct: insulin chain B-like #status predicted <DOB>
F;63-74/Pomain: insulin connecting peptide-like #status predicted <CHC>
F;75-95/Domain: insulin chain A-like #status predicted <DOA>
F;96-103/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>
F;39-81,51-94,80-85/Disulfide bonds: #status predicted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A, Molecule type: DNA
A; Restdues: 1-154 <DIC
A; Cross-references: EMBL: X51358
R; Wong, E.A.; Ohlsen, S.M.; Godfredson, J.A.; Dean, D.M.; Wheaton, J.E.
DNA 8, 649-657, 1989
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Experimental source: fetal plasma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 76.1%;
Best Local Similarity 97.7%;
Matches 84; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Accession: S07198
A; Molecule type: protein
A; Residues: 34-103 <FRA>
                                                                                                                                                                                                                                                                                                                                                                                                      A;Status: preliminary
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                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                      A; Accession: S22878
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A; Molecule type: protein
A; Molecule type: protein
A; Residues: 49-118 (400x)
B; Francis, G.L.; Upton, F.M.; Ballard, F.J.; McNeil, K.A.; Wallace, J.C.
Biochem. J. 251, 95-103, 1988
A; Title: Insulin-like growth factors 1 and 2 in bovine colostrum. Sequences and biologic
A; Reference number: $00465; MUID:88268820
A; Accession: $00465
A; Molecule type: protein
A; Reference number: $00465; MUID:88268820
A; Molecule type: protein
A; Reference number: $00465
A; Molecule type: protein
A; Reference number: propeptide #status experimental cobb>
B; Molecule type: protein
A; Reference number: protein
A; Molecule type: protein
A; Molecule ty
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Blosci. Biotechnol. Blocchem. 59, 87-82, 1995
Title: Dynamic aspects in the expression of the goat insulin-like growth factor-I (IGF eference number: JC2483; MUID:95201385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Molecule type: mRNA
A;Residues: 1-154 <MIK>
A;Cross-references: GB:S11378; DDBJ:D26116; DDBJ:D26117; DDBJ:D26118; DDBJ:D26119
C;Genetics:
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C;Species: Capra aegagrus hircus (domestic goat)
C;Date: 16-Mar-1995 #sequence_revision 26-May-1995 #text_change 17-Mar-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 109
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C; Superfamily: insulin
F;1-49/Domain: signal sequence #status predicted <SIG>
F;50-119/Product: insulin-like growth factor-I #status predicted <MAI>
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Best Local Similarity 98.8
Matches 85, Conservative
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Matches 84; Conserv
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A; Molecule type: mRNA
A; Residues: 'MSAPP',22-153 <KA2>
A; Residues: 'MSAPP',22-153 <KA2>
A; Experimental source: liver:
A; Note: the authors present evidence that this mRNA may contain an artifactual invers
B; Tamura, K.; Kobayashi, M.; Ishii, Y.; Tamura, T.; Hashimoto, K.; Nakamura, S.; Niwa
J; Biol Chem. 264, 5616-561, 1989
A; Title: Primary structure of rat insulin-like growth factor-I and its biological act
A; Reference number: A32857; MUID:89174609
                                                                                                                                                                                                                                                                                                                                         R;Kato, H.; Takenaka, A.; Miura, Y.; Nishiyama, M.; Noguchi, T. Andrews, A.; Miura, Y. 2223-2230, 1990
Agric. Biol. Cofem. 84, 2223-2230, 1990
A;Title: Evidence of introduction by molecular cloning of artificial inverted sequenc
A;Reference number: JN0088; MUID:91136779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cispecies: Mis misculus (house mouse)
Cispecies: Mis misculus (four fisses)
Cispecies: Mis misculus (four fisses)
Cispecies: Mis for fisses)
Cispecies: Mis fisses
Cispecies: Misculus (four fisses)
C
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A;Residues: 49-118 <TAM>
R;Canalis, E.; McCarthy, T.; Centrella, M.
Radocrinology 122, 22-27, 1988
A;Title: Isolation and characterization of insulin-like growth factor I (somatomedin-A;Reference number: A61096; MUID:88082445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: DNA
A; Residues: 49-108 <RES>
A; Cross-references: GB:M28139; NID:g341835; PIDN:AAA74553.1; PID:g550489
R; Mathews, L.S.; Norstedt, G.; Palmiter, R.D.
Proc. Natl. Acad. Sci. U.S.A. 83, 9343-9347, 1986
A; Title: Regulation of insulin-like growth factor I gene expression by growth hormone
                                       a rat complementary deox
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                             A; Molecule type: mRNA
A; Residues: 46-153 <MUR>
A; Cross-references: GB:M17714; NID:9204324; PIDN:AAA41227.1; PID:9204325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A Molecule type: protein
A;Residues: 49-53, X, 55-65 <CAN>
C;Superfamily: insulin
C;Keywords: alternative splicing; growth factor
E;49-118/Product: insulin-like growth factor I #status experimental
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                      A;Title: Identification, characterization, and regulation of A;Reference number: A28504; MUID:87246437
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Pred. No. 1.1e-39;
1; Mismatches 3;
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Best Local Similarity 95.3%;
Matches 82; Conservative 1
                                                                                                                          A; Accession: A28504
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Acasella, S.J.; Smith, E.P.; Van Wyk, J.J.; Joseph, D.R.; Hynes, M.A.; Hoyt, E.C.; Lund
R.Casella, S.J.; Smith, E.P.; Van Wyk, J.J.; Joseph, D.R.; Hynes, M.A.; Hoyt, E.C.; Lund
R.Casella, S.J.; Smith, E.P.; Van Wyk, J.J.; Joseph, D.R.; Hynes, M.A.; Hoyt, E.C.; Lund
R.Casella, S.J.; Smith, E.P.; Van Wyk, J.J.; Joseph, D.R.; Hynes, M.A.; Hoyt, E.C.; Lund
R.Statie: Isolation of rat testis cDNAs encoding an insulin-like growth factor I precurse
A.Ricession: A27849
A.Noccasion: A27849
A.Noccasion: A27849
A.Noccasion: A27849
A.Noccasion: A27840
A. Miuro, M.; Okoshi, A.; Miuro, Y.; Noguchi, T.
Agric. Biol. Chem. 54, 1599-1601, 1990
A.Residues: 27-153 «CAS>
A.Cossion: J40133; MulD:91103966
A.Recession: J40133; MulD:91103966
A.Residues: 27-153 «KAT>
A.Residues: 27-154 «KAT>
A
                                                                              A. Wolecule type: protein
A. Wolecule type: protein
A. Residues: 50-79 < HEY>
R. Francis, G.L.; Monell, K.A.; Wallace, J.C.; Ballard, F.J.; Owens, P.C.
Endocrinology 124, 113-1183, 1989
A. Title: Sheep insulin-like growth factors I and II: sequences, activities and assays.
A. Reference number: 807198; MUD:89136887
A. Accession: 807198
A. Molecule type: protein
A. Residues: 50-119 < FRA>
A. Residues: 50-119 < FRA>
A. Experimental source: fetal plasma
A. Experimental source: fetal plasma
C. Genetics:
A. Introns: 21/3; 75/1; 135/3
C. Superfamily: insulin
C. Keywords: alternative splicing; growth factor; plasma
C. Superfamily: insulin
C. Keywords: alternative splicing; growth factor; plasma
F.1-21/Domain: signal sequence #status predicted < NOB>
F. 50-119/Product: insulin-like growth factor (CHD>
F. 50-119/Product: insulin chain B-like #status predicted < NOB>
F. 50-78/Domain: insulin chain A-like #status predicted < CHD>
F. 91-111/Domain: peptide D #status predicted < CHD>
F. 91-111/Domain: peptide D #status predicted < CHD>
F. 91-111/Domain: carboxy1-terminal propeptide (E peptide) #status predicted
F. 55-97,67-110,96-101/Disulfide bonds: #status predicted
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N.Alternate names: IGF-IA; somatomedin C
C; Species: Rattus norvegicus (Norway rat)
C; Dete: 16-Mar-1989 #sequence_revision 16-Mar-1989 #text_change 21-Jul-2000
C; Accession: B27804; A27849; JH0133; A28504; JN0088; A32857; A61096
R; Shimatsu, A.; Rotwein, P.
J. Biol. Chem. 262, 7884-7900, 1987
A; Title: Mosaic evolution of the insulin-like growth factors. Organization, sequence, AREference number: A27804; MUID:87222423
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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Pred. No. 3.3e-40;
0; Mismatches 2; Indels
A; Reference number: S04972; MUID: 89323215
A; Accession: S07965
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Best Local Similarity 97.7%;
Matches 84; Conservative
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A; Reference number: 159090; MUID: 87092249

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A; Accession: 199090
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Mesidues: 49-108 <a href="https://document.cs">document.cs</a>
A; Cross-references: GB:M14983; NID:g194495; PIDN:AAA37925.1; PID:g194496
A; Cross-references: GB:M14983; NID:g194495; PIDN:AAA37925.1; PID:g194496
C; Generics:
A; Gene: 1gfl
C; Superfamily: insulin
C; Keywords: alternative splicing; growth factor
E; 1-22/Domain: signal sequence #status predicted <SIG>F; 23-127/Product: insulin chain B-11ke #status predicted <DOB>F; 23-51/Domain: insulin chain B-11ke #status predicted <DOB>F; 4-84/Domain: insulin chain A-11ke #status predicted <DOA>F; 85-92/Domain: document of the model 
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1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60

Search completed: October 25, 2002, 15:59:28 Job time : 13.5904 secs

61 CAPLKPAKSARSVRAQRHTDMPKTQK 86

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us-09-852-261-2.rsp

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GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
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OM protein - protein search, using sw model

Run on:

October 25, 2002, 15:52:51; Search time 6.62651 Seconds (without alignments) 642.745 Million cell updates/sec

Title: Perfect score:

US-09-852-261-2 598 1 GPETLCGAELVDALQFVCGD.....STNKNTKSQRRKGSTFEEHK 110

Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

105224 seqs, 38719550 residues rched:

105224 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt_40:* Database : Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SIIMMARTES

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SUMMARIES	ID	IGF1_RABIT	IGFB_HUMAN	IGFB_MOUSE	IGFB_RAT	IGF1_CAVPO	IGFA_HUMAN	IGF1_PIG	- 1	IGF1_BOVIN	IGF1_CAPHI	IGF1_SHEEP	IGFA_RAT	IGFA_MOUSE	IGF1_COTJA	IGF1_CHICK	IGF1_XENLA	IGF1_SUNMU	IGF1_HORSE	IGF1_ONCKI	IGFB_CYPCA	IGF1_ONCMY	IGFA_CYPCA	IGF2_ONCMY	IGF2_SHEEP	IGF2_CAVPO	IGF2_BOVIN	IGF2_MOUSE	IGF2_MUSVI	IGF2_HUMAN	IGF2_RAT	IGF2_HORSE	IGF2_PIG	IGF2_CHICK
	ngth DB	. 4	195 1	133 1	181 1	130 1	2	153 1	122 1	154 1	154 1	154 1	153 1	127 1	124 1	153 1	153 1	81 1	122 1	176 1	161 1	176 1	161 1	214 1	179 1	128 1	155 1	180 1	129 1	180 1	180 1	181 1	181	66 1
æ	Query Match Length		93.6	87.2	82.6	78.3	78.3	7.77	77.4	77.4	76.8	76.1	75.3	74.7	9.02	9.07	70.2	69.3	67.4	67.1	8.99	9.99	65.8	44.2	40.3	39.3	39.3	39.0	æ	æ	œ	38.3	38.1	37.1
	Score	572.5	260	521,5	494	468	468	464.5	463	463	459	455	450	447	422	422	419.5	414	403	401	399.5	398	393.5	264.5	241	235	235	233	232.5	231	229.5	229	228	222
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IGE_MYXGL INS_MYOSC	INS_GADCA INS1_BATSP	INS2_BATSP	INS_CHIBR	INS_ZAODH	INS_ALLMI	INS2_THUTH	INS_ANSAN	INS_CROAT
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139	51	50 0 0 0 0	51	51	51	51	51	51
36.7	26.5 26.0	25.8	24.9	24.9	24.7	24.5	24.4	24.4
219.5	158.5	154	149	149	148	146.5	146	146
34 35	36 37	80 B	40	41	42	43	44	45

ALIGNMENTS

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BY SIMILARITY.
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VOPPSTNKKMKSORRKGSTFEEHK -> EVHLKNTSRGSA
GNRNYRM (IN ISOFORM IGF-IA).
91 MW; 819AF577800A1B1A CRC64;
nR 1; Length 143;
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MEDLINE-86168194; PubMed-2937782;
Rotwein P., Pollock K.M., Didier D.K., Krivi G.G.;
"Organization and sequence of the human insulin-like growth factor I gene. Alternative RNA processing produces two insulin-like growth factor I precursor peptides.";
J. Biol. Chem. 261:4828-4832(1986).
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Rinderknecht E., Humbel R.E.;
The amino acid sequence of human insulin-like growth factor I and
its structural homology with proinsulin.";
J. Biol. Chem. 253:2769-2776(1978).
                                                                                                                                                                                                                                  11 GABTLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                       13-AUG-1987 (Rel. 05, Created)
13-AUG-1987 (Rel. 05, Last sequence update)
13-DEC-1998 (Rel. 37, Last annotation update)
11-DEC-1998 (Rel. 37, Last annotation u
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Two insulin-like growth factor I messenger RNAs are expressed in
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"Organization of the human genes for insulin-like growth factors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-84295593; PubMed-6382022;
Dull T.J., Gray A., Hayflick J.S., Ullrich A.;
"Insulin-like growth factor II precursor gene organization in
relation to insulin gene family.";
                                                                                                                                                                                                                                                                                                     93 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRRKGSTFEEHK 143
                                                                                                                                                                                                                                                                                     61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQ-RRKGSTFEEHK 110
                                                                                                                                                .5;
6.9e-54;
2;
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                                                                                                                                            Score 572.5; I
Pred. No. 6.9e-
1; Mismatches
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MEDLINE-86094355; PubMed=3455760;
                                                                                                         16091 MW;
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ilarity 96.4%;
Conservative
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     102
80
93
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143
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3D-STRUCTURE MODELING.
                                                                                                         143 AA;
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                                                                                                                                                              Similarity
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P05019;
                                                                                                                                                                             Matches 107;
     DOMAIN
DISULFID
                                                                                                         SEQUENCE
                                        DISULFID
                                                    DISULFID
                                                                                                                                            Query Match
                                                                          VARSPLIC
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This SWISS-PROT entry is copyright. It is produced through a collaboration
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Disoline—89207850; PubMed=3242681; 'Melline—89207850; Dahinden R., Maerki W., Richter W.J., Merryweather J.P.; Raschdorf F., Dahinden R., Maerki W., Richter W.J., Merryweather J.P.; Raschdorf F., Dahinden B., Maerki W., Richter W.J., Merryweather J.P.; Raschdorf Gisulphide bonds in human insulin-like growth factors (IGFs) synthesized by recombinant DNA technology."; Blomed. Environ. Mass Spectrom. 16:3-8(1988).

-I. FUNCTION. THE INSULIN-LIKE GROWTH PROMOTIN RELATED TO INSULIN BUT HAVE A MUCH HIGHER GROWTH-PROMOTING ACTIVITY.

-I. SUBELLULAR LOCATION: Secreted.

-I. ALTERNATIVE PRODUCTS: TWO FORMS OF IGF-1, IGF-IA AND IGF-IB ARE PRODUCED BY ALTERNATIVE SPLICING.

-I. SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sato A., Nishimura S., Ohkubo T., Kyogoku Y., Koyama S., Kobayashi M., Yasuda T., Kobayashi Y.; "IH-NMR assignment and secondary structure of human insulin-like growth factor-I (IGF-I) in solution."; J. Biochem. 111:529-536(1992).
                                                                                                                                                                                                                                                             Cooke R.M., Harvey T.S., Campbell I.D.; "Solution structure of human insulin-like growth factor 1: a nuclear magnetic resonance and restrained molecular dynamics study."; Blochemistry 30:5484-5491(1991).
                           Blundell T.L., Bedarkar S., Humbel R.E.;
"Tertiary structures, receptor binding, and antigenicity of
insulinlike growth factors.";
Fed. Proc. 42:2597(1983).
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Insulin family; Growth factor; 3D-structure; Plasma; Alternative splicing; Signal.
SIGNAL.
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SMART; SM00078; IIGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                             STRUCTURE BY NMR.
MEDLINE=92316903; Pubmed=1319992;
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CAA27250.1; ALT_SEQ
                                                                                                                                                                                                                          MEDLINE=91242464; PubMed=2036417;
MEDLINE-83210259; PubMed-6189745;
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M14153; AAA52537.1;
M14154; AAA52537.1;
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X03422; CAA27154.1;
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PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       X03420; CAA27152.1;
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EMBL; X03421; CAA2715
EMBL; X03422; CAA2715
PIR; A01611; IGHU1B.
PIR; A23614; A23614.
PIR; S30540; S30540.
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PDB; 3GF1; 15-APR-93
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EMBL; X03563;
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INSULIN-LIKE GROWTH FACTOR IB.

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Biol. Chem. 262:7894-7900(1987)
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MEDLINE=87222423; PubMed=3034909;
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01-FEB-1991 (Rel. 17, Last sequ
30-MAY-2000 (Rel. 39, Last anno
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                                                                                                                                                                                                                                     14915
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Best Local Similarity 89.28
Matches 99, Conservative
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51
63
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DOMAIN
DOMAIN
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                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bell G.I., Stempton M.M., Pong N.M., Rall L.B.;
"Sequences of liver cDNAs encoding two different mouse insulin-like
growth factor I precursors."
"Sequences of liver cDNAs encoding two different mouse insulin-like
growth factor I precursors."

- I FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
MUCH HIGHER GROWTH-PROMOTING ACTIVITY.

- I SUBCELLUIAR LOCATION: Secreted.
- ALTERNATIVE PRODUCTS: I ISOFORM IGF-IA (AC POSO17) AND
ISOFORM IGF-IB (SHOWN HERE); ARE PRODUCED BY ALTERNATIVE SPLICING.
- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                         49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                  0; Gaps
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                               13-AUG-1987 (Rel. 05, Created)
13-AUG-1987 (Rel. 05, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin)...
                                                                                                                                                                                                                                             Length 195;
                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                          E88A8CFBD1CD1873 CRC64;
                                                                                                                                                                                                                                                                                                                            61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRRKG 103
                                                                                                                                                                                                                                                                                                                                     109 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRRKG 151
                                                                                                                                                                                                                                             93.6%; Score 560; DB 1;
100.0%; Pred. No. 2e-52;
iive 0; Mismatches 0
                                            PEPTIDE
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EDYCB
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Best Local Similarity 100.
Matches 103; Conservative
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106
109
195 AA;
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P05018;
                                                    DISULFID
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STRAND
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus
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                                                                                                                                                                                                          PRINTS; PRO0277; INSULINB.
PRODOM; PRO01048: Insulin_IGF_relaxin; 1.
SWART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
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MEDLINE=89127259; PubMed=3221878;
Roberts C.T., Lasky S.R., Lowe W.L., Seaman W.T., Leroith D.;
"Structure of the rat insulin-like growth factor II transcriptional unit: heterogeneous transcripts are generated from two promoters by use of multiple polyadenylation sites and differential ribonucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Shimatsu A., Rotwein P.; "Mosaic evolution of the insulin-like growth factors. Organization, sequence, and expression of the rat insulin-like growth factor I dene.":
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
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Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin).
IGF1 OR IGF-1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 CAPLKPAKSARSVRAQRHIDMPKIQKYQPPSINKNIKSQ-RRKGSIFEEHK 110
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Pred. No. 1.6e-48;
; Mismatches 9
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A.
D.
E. PEPTIDE.
BY SIMILARITY.
BY SIMILARITY.
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EMBL; X04482; CAA28170.1; -.
PIR; B25540; B25540.
HSSP; P05019; LGF1.
MGD; MGI:96432; Igf1.
InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
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1;

Cavia porcellus (Guinea pig). Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Hystricognathi; Caviidae; Cavia.

SEQUENCE FROM N.A.

NCBI_TaxID=10141;

01-AUG-1990 (Rel. 15, Created) 01-AUG-1990 (Rel. 15, Last sequence update) 01-FEB-1994 (Rel. 28, Last annotation update) Insulin-like growth factor I precursor (IGF-I) (Somatomedin)

130 AA

PRT;

STANDARD;

IGF1_CAVPO

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                                                          MEDLINE-89174609; Pubmed=2538424;

Tamura K., Kobayashi M., Ishii Y., Tamura T., Hashimoto K.,

Tamura S., Niwa M., Zapf J.;

"Primary structure of rat insulin-like growth factor-I and its
biological activities.";

J. Biol. Chem. 264:5616-5621(1989).

-I- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,

ARE STROCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A

MUCH HIGHER GROWTH-PROMOTING ACTIVITY.

-I- SUBCELLULAR LOCATION: Secreted.

-I- SUBCELLULAR LOCATION: Secreted.

-I- SUBCELLULAR LOCATION: SECRETED.

-I- SUBCRICHOLAR LOCATION: SECRETED.

-I- SHERNATIVE PRODUCTS: 2 ISOFORMS; ISOFORM IGF-IA (AC PO8025) AND

-I- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              49 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 108
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRINTS; PRO0276; INSULINA.
PRINTS; PRO0277; INSULINB.
PRODOM; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM0078; ILGF; 1.
PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
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0
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BY SIMILARITY.

APL -> VRC (IN REF. 2).

52BAB431875A1A06 CRC64;
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Pfam; PF00049; Insulin; 1.
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D.
E PEPTIDE.
acid splicing.";
Mol. Endocrinol. 2:1115-1126(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; M15649; AAA41214.1; JOINED.
EMBL; M15649; AAA41214.1; JOINED.
EMBL; X06107; CAA29480.1; ALL_SED.
EMBL; M15480; AAA41385.1; ALT_SED.
                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; M15650; AAA41214.1; -.
EMBL; M15647; AAA41214.1; JOINED.
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PIR; A26859; A26859.
PIR; A32857; A32857.
HSSP; P05019; 1GF1.
                                                SEQUENCE OF 49-118.
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
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Bell G.I., Stempien M.M., Fong N.M., Scino S.;
"Sequence of a cDNA encoding guinea pig IGF-I.";
"Nucleic Acids Res. 18:4275-4275[1990].
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA, ARE STRUCTUBALLY AND FUNCTIONALLY RELATED TO INSULIN HAVE A MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
-!- SUBCELLULAR LOCATION: Secreted.
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     or send an email to license@isb-sib.ch).
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Best Local Similarity 100.
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HSSP; P05019; IGF1
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ID IGFA_HU
AC P01343;
DT 21-JUL-
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RESULT 5 IGF1_CAVPO

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Characterization of two cDNAs encoding insulin-like growth factor
(IGF-1) in the human feetal brain ";
Brain Res. Mol. Brain Res. 12:275-277(1992).
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"The amino acid sequence of human insulin-like growth factor I and
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Gabbay K.H., Nussbaum A.L., Sussenbach J.S., van den Brande J.L.;
"Sequence of cDNA encoding human insulin-like growth factor I
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                                                           Euteleostomi;
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  sequence update)
annotation update)
IA precursor (IGF-IA) (Somatomedin C)
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Dull T.J., Gray A., Hayflick J.S., Ullrich A.;
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                                            Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutele
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                    factor I precursor peptides.";
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                                                                                                                     MEDLINE=86168194; PubMed=2937782;
                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A. MEDLINE-86108910; PubMed-2935423;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE=Liver;
MEDLINE=91207342; PubMed=2018498;
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MEDLINE=92186627; PubMed=1372070;
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MEDLINE-83210259; PubMed=6189745;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          'EBS Lett. 195:179-184(1986).
13-AUG-1987 (Rel. 05, Last
15-DEC-1998 (Rel. 37, Last
Insulin-like growth factor
                                                                                                                                                                                                                                                                            Nature 306:609-611(1983).
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growth factors
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Raschdorf F., Dahinden R., Maerki W., Richter W.J., Merryweather J.P.
Raschdorf F., Dahinden R., Maerki W., Richter W.J., Merryweather J.P.
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-!-FOWATION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTURALLY AND FINCTIONALLY RELATED TO INSULIN BUT HAVE A
MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
-!- SUBCELLULAR LOCATION: Secreted.
-!- ALTERNATIVE PRODUCTS: TWO FORMS OF IGF-1, IGF-IA AND IGF-IB ARE
PRODUCED BY ALTERNATIVE SPLICTING.
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sato A., Nishimura S., Ohkubo T., Kyogoku Y., Koyama S., Kobayashi I Yasuda T., Kobayashi Y.;
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magnetic resonance and restrained molecular dynamics study.";
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Blundell T.L., Bedarkar S., Humbel R.E.; "Tertiary structures, receptor binding, and antigenicity insulinlike growth factors.";
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PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINA.
PRODOUTS; PR001074; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
Insulin familly; Growth factor; Plasma; 3D-structure; Allernative splicing; Signal.
21 POTENTIAL.
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EMBL, M12659; AAA52538.1; JOINED.
EMBL, M14153; AAA52538.1; JOINED.
EMBL, X00173; CAA24998.1; -...
EMBL, X03563; CAA24998.1; -...
EMBL, X03420; CAA27152.1; -...
EMBL, X03420; CAA27152.1; -...
EMBL, X03421; CAA27152.1; -...
EMBL, X03421; CAA27152.1; -...
EMBL, X03422; CAA27152.1; -...
EMBL, X03422; CAA27153.1; -...
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                                                                                                   Proc. 42:2592-2597(1983)
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2GF1; 15-APR-93.
3GF1; 15-APR-93.
147440; -
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S30519; S30519.
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"The porcine insulin-like growth factor-I gene: characterization and
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87.38;
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Matches 89; Conservative
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MEDLINE-94128209; PubMed=8297476;
Weller P.A., Dickson M.C., Huskisson N.S., Dauncey M.J., Buttery P.J.,
Gilmour R.S.;
                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                        1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tavakkol A., Simmen F.A., Simmen R.C.M.;
"Porcine insulin-like growth factor-I (pIGF-I): complementary deoxyribonucleic acid cloning and uterine expression of messenger ribonucleic acid encoding evolutionarily conserved IGF-I peptides.";
Mol. Endocrinol. 2:674-681(1988).
                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
MEDLINE-9022182; PubMed-2326169;
Mueller M., Brem G.;
"Nucleotide sequence of porcine insulin-like growth factor. 1:5'
untranslated region, exons 1 and 2 and mRNA.";
Nucleic Acids Res. 18:364-364(1990).
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                                                                                                                                                                                                                                                                                                                                          01-AUG-1990 (Rel. 15, Created)
01-AUG-1990 (Rel. 15, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
                                                                                                                                                                                                           Length 153;
         INSULIN-LIKE GROWTH FACTOR IA.
                                                                                                                                                                                                  Score 468; DB 1; Length 133; Pred, No. 8.8e-43;
                                                                                                                                                                                         17026 MW; C6ECD92DCA9B37BC CRC64;
                                                                                                                                                                                                    153 AA.
                                                PEPTIDE
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                                                                                                                                                                                                                                                                      61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                               PRT;
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SEQUENCE OF 20-153 FROM N.A.
MEDLINE-89096956; PubMed=3211153;
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                                                                                                                                                                                                                         86; Conservative
                                                                                                                                                                                                                                                                                                                              STANDARD;
               102
106
109
153 AA;
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Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
NCBI_TaxID=9615;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7;
                    J. Mol. Endocrinol. 11:201-211(1993).
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 153;
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01-FEB-1994 (Rel. 28, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
                                                                                                                                      -i- SUBCELLULAR LOCATION: Secreted.
-i- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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Pred. No. 2.1e-42;
1; Mismatches 5;
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PRINTS; PRO0277; INSULINB.
PRODOM; PRO01048; INSULINB.
SMART; SMO078; IIGF; 1.
PROSITE; PSO0262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Signal.
expression of alternate transcription sites.
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                                                                                                           MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
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EMBL; X52388; CAA36617.1; -.
EMBL; X52077; CAA36296.1; -.
EMBL; M31175; AAA31043.1; ALT_INIT.
EMBL; X17638; CAA35632.1; -.
PIR; S12825; S12825
HSSP; P05019; 1GF1.
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                                                                                                                                                                                                                                                                                                                                                      MEDLINE-88268820; PubMed-3390164;
Francis G.L., Upton F.M., Ballard F.J., McNeil K.A., Wallace J.C.;
"Insulin-like growth factors 1 and 2 in bovine colostrum. Sequences
and biological activities compared with those of a potent truncated
                                                                                                       Schmidt A., Einspanier R., Amselgruber W., Sinowatz F., Schams D., Expression of insulin-13ke growth factor 1 (IGF-1) in the bovine oviduct during the oestrous cycle.":

Exp. Clin. Endocrinol. 102:364-369(1994).
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"Insulin-like growth factors I and II in fetal and adult bovine serum. Purification, primary structures, and immunological cross-reactivities."
J. Biol. Chem. 261:569-575(1986).
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"Nucleotide sequence of the bovine insulin-like growth factor (IGF-1) and its IGF-1A precursor."; Nucleic Acids Res. 18:676-676(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                -!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
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-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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SIGNAL 1 ?
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0; Mismatches
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InterPro; IPR000739; Insulin_IGF_relaxin.
PERM: PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
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                                                                      SEQUENCE OF 50-119 FROM N.A. MEDLINE-95172127; Pubmed=7867698;
                                                                                                                                                                                                                 MEDLINE-86085881; PubMed-3941093;
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Biochem. J. 251:95-103(1988).
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SEQUENCE OF 50-119.
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Matches 85; Conserv
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                                                                                                         PLASMA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos.
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                             MEDLINE-93366192; Pubmed-8359700;
Delafontaine P., Lou H., Harrison D.G., Bernstein K.E.;
"Sequence of a CDNA encoding dog insulin-like growth factor I.";
Gene 130:305-306(1993).
-I- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE
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01-NOV-1991 (Rel. 20, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 122;
                                                                                                                                                      -1- SUBCELLULAR LOCATION: Secreted.
-1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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INSULIN-LIKE GROWTH FACTOR
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BY SIMILARITY.

036A004DC44E7D75 CRC64;
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PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Signal.
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                                                                                                                                          MUCH HIGHER GROWTH-PROMOTING ACTIVITY
                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
ProDom; PD001048; Insulin_IGF_relaxin; 1.
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MEDLINE-90175014; PubMed-2308858;
Fotsis T., Murphy C., Gannon F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ΜW.;
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98.8%;
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Matches 85; Conservative
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HSSP; P05019; 1GF1.
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                  SEQUENCE FROM N.A.
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P07455;
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TISSUE-Liver
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              Query Match
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P10763;
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IGF1_SHEEP
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                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
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 50 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPOTGIVDECCFRSCDLRRLEMY 109
                                                                                                                                                                                                                                                                                         Mikawa S., Yoshikawa G.-I., Yamano Y., Sakai H., Komano T., Hosoi Y.,
Utsumi K.;
                                                                                                                                                                                                                                                                                                                                                                          MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
--- SUBCELULAR LOCATION: Secreted.
--- TISSUE SPECIFICITY: EXPRESED IN ALL TISSUES EXAMINED: BRAIN,
LUNG, LIVER, SPLEEN, UTERUS, OVARY, TESTIS, HEART AND SKELETAL
                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                           growth factor-I (IGF-I) mRNAS.";
Biosci. Biotechnol. Biochem. 59:759-761(1995).
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASM
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE
                                                                                                                                                                                                                                                                                                                 "Tissue- and development-specific expression of goat insulin-like
                                                                                                                                        16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
                                                                                                                                                                                                                                                                                                                                                                                                                                  -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INSULIN-LIKE GROWTH FACTOR I.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Growth factor; Plasma; Signal
                                                                                                        154 AA
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SIMILARITY.
SIMILARITY.
                                                                                                                                                                                                                                                       SEQUENCE FROM N.A., AND TISSUE SPECIFICITY. STRAIN=SHIBA; TISSUE=Liver; MEDLINE=95290780; PubMed=7772848;
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Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRINTS; PR00277; INSULINB.
ProDom; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; I1GF; 1.
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                                  110 CAPLKPAKSARSVRAQRHTDMPKAQK 135
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                       61 CAPLKPAKSARSVRAQRHTDMPKTQK
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16-0CT-2001 (Rel. 40, Last sequ
16-0CT-2001 (Rel. 40, Last anno
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EMBL; D26118; BAA05114.1;
EMBL; D26119; BAA05115.1; -.
EMBL; D11778; BAA01976.1; -.
HSSP; P05019; IGF1.
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NCBI_TaxID=9925;
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Capra hircus (Goat).
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MEDILINE-89323215, Pubmed-2752053;
MEDILINE-89323215, Pubmed-2752053;
MEDILINE-89323215, Pubmed-2752053;
"Simultaneous isolation of insulin-like growth factors I and II from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=93221682; PubMed=8466647; Ohlsen S.M., Dean D.M., Wong E.A.; Characterization of multiple transcription initiation sites of the voine insulin-like growth factor-I gene and expression profiles of three alternatively spliced transcripts."; DNA Cell Biol. 12:243-251(1993).
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MEDLINE-90126234; PubMed-2575490;
MODLINE-90126234; PubMed-2575490;
WONG E.A., Ohlsen S.M., Godfredson J.A., Dean D.M., Wheaton J.E.;
WCloning of ovine insuline-like growth factor-I cDNAs: heterogeneity
in the mRNA population.";
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MEDLINE-92350051; PubMed-846157;
Demmer J., Hill D.F., Petersen G.B.;
"Characterization of two sheep insulin-like growth factor II cDNAs with different 5'-untranslated regions.";
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
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                                                                                                                                                                           GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE-91197361; PubMed-2015053; Dickson M.C., Saunders J.C., Gilmour R.S.; The ovine insulin-like growth factor-I gene: characterization, expression and identification of a putative promoter."; J. Mol. Endocrinol. 6:17-31(1991).
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01-FEB-1991 (Rel. 17, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
                                                  Length 154;
Score 459; DB 1; Len
No. 7.9e-42;
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                                                                                 Pred. No. 7.96
0; Mismatches
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Biochim. Biophys. Acta 1173:79-80(1993).
                                                                                                                                                                                                                                                                                                                              110 CAPLKPTKSARSVRAQRHTDMPKAQK 135
                                                                                                                                                                                                                                                                                               86
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                                                                                                                                                                                                                                                                                               61 CAPLKPAKSARSVRAQRHTDMPKTQK
                                              76.8%;
ilarity 97.7%;
Conservative (
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                                                                           Best Local Similarity
Matches 84; Conserv
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50 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 109
                                                                    61 CAPLKPAKSARSVRAQRHTDMPKTQK
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                                                                                                                                                                                                                                                                                modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
adult sheep serum.";
Biochim. 
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PRINTS; PRO0277; INSULINB.
PRODON; PD001048; Insulin_IGF_relaxin; 1.
PROSTR; SMO078; IIGF; 1.
PROSTR; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Signal; Alternative splicing.
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E226CE6AF653CF3F CRC64;
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MISSING (IN ISOFORM A).
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Pfam; PF00049; Insulin; 1.
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CAA49232.1; JOINED.
AAA31544.1; -
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17012 MW;
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97.7%;
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AAA31547.1;
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CAA49230.1;
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PIR; B33390; B33390.
PIR; S07198; S07198.
PIR; S07965; S07965.
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154 AA;
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SEQUENCE OF 46-153 FROM N.A. MEDLINE=87246437; PubMed=3595538; Marphy L.J., Bell G.I., Duckworth M.L., Friesen H.G.; "Identification, characterization, and regulation of a rat complementary deoxyribonucleic acid which encodes insulin-like growth
                                                                                                                                                                                                                                                                                                                                                                                                                                Hoyt E.C., Lund P.K.;
"Isolation of rat testis cDNAs encoding an insulin-like growth factor
                                                                                                                                        Eukaryota, Metazoa; Chórdata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE—89174609; PubMed=2538424;
Tamura K., Kobayashi M., Ishii Y., Tamura T., Hashimoto K.,
Nakamura S., Niwa M., Zapf J.;
Primary structure of rat insulin-like growth factor-I and its
biological activities."
J. Biol. Chem. 264:5616-5621(1989).
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Roberts C.T., Lasky S.R., Lowe W.L., Seaman W.T., Leroith D.; "Structure of the rat insulin-like growth factor II transcriptional unit: heterogeneous transcripts are generated from two promoters by use of multiple polyadenylation sites and differential ribonucleic acid splicing."
                                                                                                                                                                                                                                               Shimatsu A., Rotwein P.; "Mosaic evolution of the insulin-like growth factors. Organization, sequence, and expression of the rat insulin-like growth factor I
                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-88003970; Pubmed-3652906;
Casella S.J., Smith E.P., van Wyk J.J., Joseph D.R., Hynes M.A.,
                                                                                    Insulin-like growth factor IA precursor (IGF-IA) (Somatomedin).
IGF1 OR IGF-1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
MEDLINE-91103966; Pubmed=1368571;
Kato H., Okoshi A., Miura Y., Noguchi T.;
"A new cDNA clone relating to larger molecular species of rat insulin-like growth factor-I mRNA.";
Agric. Biol. Chem. 54:1599-1601(1990).
                                                                     Last annotation update)
153 AA.
                                                     Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mol. Endocrinol. 2:1115-1126(1988).
 PRT;
                                                                                                                                                                                                                                                                                                                       J. Biol. Chem. 262:7894-7900(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
MEDLINE=89127259; Pubmed=3221878;
                                                                                                                                                                                                            SEQUENCE FROM N.A. MEDLINE-87222423; Pubmed-3034909;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Endocrinology 121:684-691(1987).
                               01-AUG-1988 (Rel. 08, Created)
01-FEB-1991 (Rel. 17, Last seq
30-MAY-2000 (Rel. 39, Last ann
 STANDARD;
                                                                                                                         Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6:325-330(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE OF 49-118.
                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                             NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 acid splicing.
                                                                                                                                                                                                                                                                                                                                                                              TISSUE=Testis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     precursor
IGFA_RAT
P08025;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               factor-I.
                                                                                                                                                                                                                                                                                                        gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA
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0; Gaps

1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60

0; Mismatches

Conservative

84;

Matches

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127 AA;
                             SEQUENCE FROM N.A.
  NCBI_TaxID=10090;
                                                                                                                                                                                                            SPLICING
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IGF1.
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P51462;
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ID IGF1_CC

AC P51462)

DT 01-OCT

DT 16-OCT

DE Insulii

DE (Fragme

GN IGF1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIGNAL
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                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .;
0
-i- ALTERNATIVE PRODUCTS: 2 ISOFORMS; ISOFORM IGF-IA (SHOWN HERE) AND ISOFORM IGF-IB (AC P08024); ARE PRODUCED BY ALTERNATIVE SPLICING.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     49 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Growth factor; Plasma; Alternative splicing; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13-AUG-1987 (Rel. 05, Created)
13-AUG-1987 (Rel. 05, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Insulin-like growth factor IA precursor (IGF-IA) (Somatomedin).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INSULIN-LIKE GROWTH FACTOR IA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 450; DB I; Length 15
Pred. No. 7.1e-41;
1; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIMILARITY.

L -> VRC (IN REF. 4).

966F3C0FA4EB3DE7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIMILARITY.
SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                    PRINTS; PR00277; INSULINB.
ProDom; PD001048; Insulin_IGF_relaxin; 1.
SWART; SM00078; I1GF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          109 CAPLKPTKSARSIRAQRHTDMPKTQK 134
                                                                                                                                                                                                                                                 EMBL; M17335; AAA41386.1; ALT_INIT.
EMBL; M15481; AAA41387.1; ALT_INIT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                         M15647; AAA41215.1; JOINED.
M15648; AAA41215.1; JOINED.
M15649; AAA41215.1; JOINED.
M17714; AAA41227.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APL
                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17079 MW;
                                                                                                                                                              EMBL; X06043; CAA29436.1; -. EMBL; M15651; AAA41215.1: -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  75.3%;
95.3%;
                                                                                                                                                                                                                                                                                                                                                                                    PRINTS; PR00276; INSULINA PRINTS; PR00277; INSULINB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            82; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IGF1 OR IGF-1.
Mus musculus (Mouse).
                                                                                                                                                                                                                                                                            PIR; A27849; A27849.
PIR; JH0133; JH0133.
PIR; B27804; B27804.
                                                                                                                                                                                                                                                                                                                   PIR; A32857; A32857.
PIR; A28504; A28504.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       153 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                               HSSP; P05019; 1GF1
                                                                                                                                                                                                                                                                                                                                                                                                                                                            insulin family;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IGFA_MOUSE
P05017;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CONFLICT
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DOMAIN
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DOMAIN
                                                                                                                                                                                                                      EMBL; 1
                                                                                                                                                                                            EMBL;
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entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                 the European Bioinformatics Institute or Bioinformatics and the EMBL outstation use by non-profit institutions as long as its content is in no war modified and this statement is not removed. Usage by and for commercial entities requires a linear and the statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRINTS; PRO0276; INSULINA.
PRINTS; PRO0277; INSULINB.
PRODOM; PD001048; Insulin_IGF_relaxin; 1.
SWART; SM0078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 82
                                                                                                             PLASMA,
HAVE A
                   Bell G.I., Stemplen M.M., Fong N.M., Rall L.B.; "Sequences of liver cDNAs encoding two different mouse insulin-like
                                                                                                                                                                                -!- SUBCELLULAR LOCATION: Secreted.
-!- ALTERNATIVE PRODUCTS: 2 ISOFORMS; ISOFORM IGF-IA (SHOWN HERE)
AND ISOFORM IGF-IB (AC P05018); ARE PRODUCED BY ALTERNATIVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                             01-OCT-1996 (Rel. 34, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INSULIN-LIKE GROWTH FACTOR IA
                                                                                                                                                                                                                                                                           -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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Y SIMILARITY.

Y SIMILARITY.

1 05488CAC72DC2D7 CRC64;
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94.2%; Pred. No. 1.2e-40;
Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            124 AA
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2; Mismatches
                                                                                                                                                             MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HSSP; POSO19; 1GF1.
MGD; MG1:56432; 1gf1.
InterPro; 1PR00739; Insulin_IGF_relaxin.
Pfam: PF00049; Insulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A.
D.
E PEPTIDE.
BY SIMILAR.
BY SIMILAR.
BY SIMILAR.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
MEDLINE-87040760; PubMed-3774549;
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14120 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; X04480; CAA28168.1; -. PIR; A25540; A25540.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity 94.2
es 81; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
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51
63
84
92
70
70
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Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                            precursor
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                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                the oviduct of
Coturnix coturnix japonica (Japanese quail).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                  Kida S., Iwaki M., Nakamura A., Miura Y., Takenaka A., Takahashi S., Noguchi T.;
"Insulin-like growth factor-I messenger RNA content in the oviduct of Japanese quail (Coturnix coturnix japonica): changes during growth and development or after estrogen administration.", comp. Biochem. Physiol. 109C:191-204(1994).
-I- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA, ARE STRUCTURALIX AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20 GPETLCGAELVDALQFVCGDRGFYFSKPTGYGSSSRRLHHKGIVDECCFQSCDLRRLEMY 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-NOV-1990 (Rel. 16, Created)
01-NOV-1990 (Rel. 16, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  POTENTIAL. INSULIN-LIKE GROWTH FACTOR I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B.
C.
A.
D.
B. E. PEPTIDE.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
C. 52254BBBA52C3B6 CRC64;
422; DB 1; Length
5.2e-38;
C. 526-38;
C. 526-
                                                                                                                                                                                                                                                                                                                                                SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 422; DB 1; Length 12.
Pred. No. 5.2e-38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               153 AA.
                                                                                                                                                                                                                                                                                                          MUCH HIGHER GROWTH-PROMOTING ACTIVITY. SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ProDom; PD001048; Insulin_IGF_relaxin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SMARY; SM00078; I1GF; 1.
PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; S75247; -; NOT_ANNOTATED_CDS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
                                                                                                                SEQUENCE FROM N.A. MEDLINE-95187621; PubMed=7881819;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gallus gallus (Chicken)
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89
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            124 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                          NCBI_TaxID=93934;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IGF1_CHICK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
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PROPEP
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      49 GPETLCGAELVDALQFVCGDRGFYFSKPTGYGSSSRRLHHKGIVDECCFQSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                       SECUENCE OF 1-21 FROM N.A.
MEDLINE=91236750; PubMed=2033062;
Rotwein P., Kajimoto Y.;
"Structure of the chicken ingulin-like growth factor I gene reveals
                                                                                                                           "Structure and expression of a chicken insulin-like growth factor I
                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-91106695; PubMed-2272467; Ballard F.J., Obnson R.J., Owens P.C., Francis G.L., Upton F.M., McMurtry J.P., Wallace J.C.; "Chicken insulin-like growth factor-I: amino acid sequence,"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            radioimmunoassay, and plasma levels between strains and during
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gen. Comp. Endocrinol. 79:459-468(1990).
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INSULIN-LIKE GROWTH FACTOR I.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAE13FDED13EE2F8 CRC64;
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ches 6;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Insulin family; Growth factor; Plasma; Signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIMILARITY. SIMILARITY.
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BML1, M4116; AA448829.1; -.
PIR; A41399; A41399.
HSSP, P05019; 1GF1.
HSSP, P05019; 1GF1.
PF60049; 1 Insulin_IGF_relaxin.
PF00049; 1 Insulin_1 I.
PF00049; 1 Insulin. 1.
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SMART; SM00078; IIGF; 1.
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                                                                                                                                                                          Endocrinol. 3:1907-1913(1989).
                                                                                                                                                                                                                                                                                                                          conserved promoter elements.";
J. Biol. Chem. 266:9724-9731(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUBCELLULAR LOCATION: Secreted
                                                                            MEDLINE=90190648; PubMed=2628728;
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89.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               77
                                                                                                      Kajimoto Y., Rotwein
                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE OF 49-118.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    153 AA;
NCBI_TaxID=9031;
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qq ò

Search completed: October 25, 2002, 15:57:34 Job time: 6.62651 secs

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GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
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OM protein - protein search, using sw model

October 25, 2002, 15:53:12; Search time 20.5422 Seconds (without alignments) 926.360 Million cell updates/sec Run on:

Title: Perfect score:

US-09-852-261-2 598 1 GPETLCGAELVDALQEVCGD.....STNKNTKSQRRKGSTFEEHK 110 Sequence:

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

562222 seqs, 172994929 residues ched:

Total number of hits satisfying chosen parameters:

562222

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SPTREMBL_19:* Database :

1: sp_archea:*
2: sp_bacteria:*
3: sp_fungi:*
4: sp_human:*

sp_organelle:*
sp_phage:*
sp_phage:*
sp_ptant:*
sp_rodent:*
sp_virus:*
sp_virus:*
sp_vertebrate:*
sp_unclass[fled:* sp_invertebrate:*
sp_mammal:*
sp_mhc:* sp_bacteriap:* sp_archeap: sp_rvirus:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Description	Q13429 homo sapien	Q9np10 homo sapien	Q14620 homo sapien	Q9n1c1 bos taurus	P79167 equus cabal	P97899 rattus sp.	093380 meleagris g	Q91230 oncorhynchu	Q91475 salmo salar	Q91162 oncorhynchu	Q91965 oncorhynchu	P81268 oncorhynchu	Q9ibi0 cyprinus ca	Q91161 oncorhynchu	Q91231 oncorhynchu	Q91476 salmo salar
ID	Q13429	Q9NP10	014620	Q9N1C1	P79167	P97899	093380	091230	091475	091162	091965	P81268	Q9IBI0	091161	091231	091476
DB	4	4	4	9	9	11	13	13	13	13	13	13	13	13	13	13
% Query Match Length DB	139	130	137	133	139	127	153	161	145	155	188	188	178	116	149	117
% Query Match	98.7	78.3	78.3	77.4	76.6	75.3	70.6	67.5	67.1	67.1	67.1	67.1	66.8	66.7	66.7	9.59
Score	590	468	468	463	458	450	422	403.5	401	401	401	401	399.5	399	399	392
Result	-	7	6	4	S	9	7	ω	6	10	11	12	13	14	15	16

		Q9pwk2 carassius		Q9yi82 carassius		. 093527	. 093607				5xsd60		a			Q28236 c		Q9iaa0	073721	042429	0px060	057687	Q90ww4		Q63265	Q9pud0 brachydani	Q9myx4 bos indicus	
60V060	091914	Q9PWK2	Q98SR6	Q9Y182	057436	093527	093607	P79824	073720	042289	Q9PSX5	Q9Y157	09N1S6	042336	002807	028236	091442	Q9IAA0	073721	042429	00X060	057687	Q90WW4	P79890	063265	000460	09MYX4	
13	13	13	13	13	13	13	13	13	13	13	13	13	9	13	9	9	13	13	13	13	13	13	13	13	11	13	ø	
161	117	161	. 161	161	185	186	159	182	182	182	186	185	99	184	69	57	126	62	215	215	207	187	217	187	154	197	149	
65.3	64.0	63.7	63.5	63.2	63.0	63.0	63.0	62.9	62.9	65.9	↤	59.4	59.4	58.7	55.8	50.5	49.9	46.5	44.1	43.6	42.9	42.7	41.9	41.6	39.4	38.9	38.5	
390.5	382.5	381	379.5	378	377	377	376.5	376	376	376	370	355.5	355	351	333.5	302	298.5	278	264	261	256.5	255.5	250.5	248.5	235.5	232.5	230	, , ,
3																												

ALIGNMENTS

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MEDITER 95237119; PubMed=7720641;

A Chew S.L., Lavender P., Clark A.J., Ross R.J.;

Chew S.L., Lavender P., Clark A.J., Ross R.J.;

The alternatively spliced human insulin-like growth factor-I

Transcript with hepatic tissue expression that diverts away from the

mitogenic IBE1 peptide.";

In mitogenic IBE1 peptide.";

C -1 SUBCELLULAR 1064710N: SECRETED (BY SIMILARITY).

C -1 SUBCELLULAR 1064710N: SECRETED (BY SIMILARITY).

RR LASP; PO1343; 1GF1.

RR HSSP; PO1343; 1GF1.

RR HSSP; PRO049; Insulin_IGF_relaxin.

RR PFEM; PRO049; Insulin; 1.

RR PRINTS; PRO0276; INSULINA.

RR PRINTS; PRO0277; INSULINA.

RR PRINTS; PRO0277; INSULINA.

RR PRINTS; PRO0277; INSULINA.

RR PRINTS; PRO0277; INSULINA.

RR PRINTS; PRO0498; Insulin_IGF_relaxin; 1.
                                                                                                                                                                            Homo sapiens (Human).
Walvaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutheriostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 139;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ouery Match 98.7%; Score 590; DB 4; Length 13 Best Local Similarity 99.1%; Pred. No. 1.9e-63; Matches 109; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       139 AA; 15611 MW; A62271872CA29DE4 CRC64;
                                                                           01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR-I (FRAGMENT).
                                      PRT; 139 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE; PS00262; INSULIN; 1.
                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SMART; SM00078; IlGF; 1.
                                                                                                                                                                                                                                                         [1]
SEQUENCE FROM N.A.
TISSUE=LIVER;
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SEQUENCE
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Q13429;
RESULT 1
Q13429
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Gaps

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Tobin G., Yee D., Brunner N., Rotwein P.;

RT "A novel human insulin-like growth factor I messenger RNA is expressed
RL "In normal and tumor cells.";

MOL. Endocrinol. 4:1914-1920(1990).

-1- SUBCELLUIAR LOCATION: SECRETED (BY SIMILARITY).

-1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.

BEMBL: M37484; AAA52789.1; -.

RINEPPRO: IPRO00739; Insulin_IGF_relaxin.

PRINTS: PRO0276; INSULINA.

PRINTS: PRO0276; INSULINA.

PRINTS: PRO01048; Insulin_IGF_relaxin; 1.

R PRODOM: PO01048; Insulin_IGF_relaxin; 1.

R PRODOM: PO01048; Insulin_IGF_relaxin; 1.

R PROSTIE: RO00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 33 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lien S., Karlsen A., Klemetsdal G., Vage D.I., Olsaker I., Klungland H., Aasland M., Heringstad B., Ruane J., Gomez-Raya L.; "A primary screen of the bovine genome for quantitative trait loci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bos taurus (Bovine).
Eukaryota; Metazooa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos
                                                                                                                                                                                                                                                                                                                                                                 137 INSULIN-LIKE GROWTH FACTOR I.
15177 MW; BFCCOD11E32AB75D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      affecting twinning rate.";
Submitted (DBC-1999) to the EMBL/GenBank/DDBJ databases.
-!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-!- SUBCELLULARLY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
EMBL; AF210387; AAF72409.1; -' OINED.
EMBL; AF210386; AAF72409.1; JOINED.
EMBL; AF210386; AAF72409.1; JOINED.
HSSP; P01343; IGF1.
InterPro; IPR000739; Insulin_IGF_relaxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       77.4%; Score 463; DB 6; Length 13
98.8%; Pred. No. 3.8e-48;
Live 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   133 AA; 14674 MW; A6991DBCB75C103B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last Sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                        78.3%; Score 468; DB 4; 100.0%; Pred. No. 9.9e-49; tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  133 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ProDom; PD001048; Insulin_IGF_relaxin; 1. SMART; SM00078; IIGF; 1.
                                                                                                                                                                                                                                                                                                                                                  POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          93 CAPLKPAKSARSVRAQRHTDMPKTQK 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
MEDLINE=91187000; PubMed=2082190;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  86; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                              32
137
                                                                                                                                                                                                                                                                                                                                                                                    137 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 85; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=9913;
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SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
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Q9N1C1;
                                                                                                                                                                                                                                                                                                                           Signal.
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QQ
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MEDLINE-88065102; PubMed=3683205;
Rall L.B., Scott J., Bell G.I.,
"Human insulin-like growth factor I and II messenger RNA: isolation of complementary DNA and analysis of expression.";
Meth. Enzymol. 146:239-248(1987).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
            GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBL_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (Human).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                          61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRRKGSTFEEHK 110
                                                                                                                   90 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRRKGSTFEERK 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          78.3%; Score 468; DB 4; Length.130; 100.0%; Pred. No. 9.3e-49; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -:- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-:- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY
EMBL; M29644; AAA52543.1; -
HSSP; P01343; 1GF1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POTENTIAL.
970FBAAECFA0352D CRC64;
                                                                                                                                                                                                                                                                                                    Last sequence update)
Last annotation update)
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 137 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRINTS; PRO0275; INSULINA.
PRINTS; PRO0277; INSULINA.
PRIODOM, PD0010048; Insulin_IGF_relaxin; 1.
SMART; SM00078; I1GF; 1.
PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR000739; Insulin_IGF_relaxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 POTENTIAL.
                                                                                                                                                                                                                                                                                 Created)
                                                                                                                                                                                                                                       PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14406 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  86; Conservative
                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                  01-OCT-2000 (TrEMBLrel.
01-DEC-2001 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                          IGF1 PROTEIN PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE 130 AA;
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Best Local Similarity
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                                                                                                                                                                                                                                                            09NP10;
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Length 133;

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Indels

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SEQUENCE FROM N.A.

MEDLINE=91103966; PubMed=1368571;

Rato H., Okoshi A., Miura Y., Noguchi T.;

Rato H., Okoshi A., Miura Y., Noguchi T.;

An ew cDNA clone relating to larger molecular species of rat insulin-
11ke growth factor-I mRNA.";

Agric. Biol. Chem. 54:1599-1601(1990).

-! SIMDELLUIAR LOCATION: SECRETED (BY SIMILARITY).

EMBL. DO0698; BAAO604.1;

ENSP; P01343; 1GF1.
                    49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                Rattus sp.
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23 GPETLCGAELVDALQEVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
  1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Meleagris gallopavo (Common turkey).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Shimatsu A., Rotwein P.; "Mosaic evolution of the insulin-like growth factors."; J. Biol. Chem. 262:7894-7900(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE 127 AA; 14106 MW; 104E126BCFCA5CB7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-NOV-1998 (TrEMBLrel. 08, Created)
01-NOV-1998 (TrEMBLrel. 08, Last Sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR-I PRECURSOR.
                                                                                                  109 CAPLKPAKSARSVR-----YQPPSTNKKTKLQRRR 138
                                                                           61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRRK 102
                                                                                                                                                                                                                                                                       (TrEMBLrel. 03, Last sequence update) (TrEMBLrel. 19, Last annotation update)
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Pred. No. 1.3e-46;
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SMART; SM00078; IlGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro: IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRIMTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
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                                                                                                                                                                                                                                                       Created)
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                                                                                                                                                                                                                                                                                                                                                                                                                                PARTIAL SEQUENCE FROM N.A.
MEDLINE-87222423; Pubmed-3034909;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1;
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ilarity 95.3%;
Conservative
                                                                                                                                                                                                                                                       01-MAY-1997 (TrEMBLrel. 03,
                                                                                                                                                                                                                                                                                                              INSULIN-LIKE GROWTH FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=10118;
                                                                                                                                                                                                                                                                         01-MAY-1997
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          82;
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Best Local S
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Otte K., Rozell B., Gessbo A., Engstrom W.; "Cloning and sequencing of an equine insulin-like growth factor I cDNA and its expression in fetal and adult tissues."; Gen. Comp. Endocrinol. 102:11-15(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SPLICING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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HAVE A
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GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                    29 GPETLCGAELVDALQFVCGDRGFYFNRPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                     Equus caballus (Horse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
                                                                                                                                                                                                                                                   01-MAY-1997 (TrEMBLrel. 03, Created)
01-07-2000 (TrEMBLrel. 15, Last sequence update)
01-05C-2001 (TrEMBLrel. 19, Last annotation update)
11NSULIN-LIKE GROWTH FACTOR IB PRECURSOR (IGF-IB) (SOMATOMEDIN C)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12;
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SEQUENCE OF 123-139 FROM N.A.
Nixon A.J., Toland B.D., Sandell L.J.;
Nixon A.J., Toland B.D., Sandell L.J.;
Submitted (Jan-1997) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM JARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT TARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT THE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT THE STRUCTURER GROWTH-PROMOTING ACTIVITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ISOFORM IGF-IB (SHOWN HERE); ARE PRODUCED BY ALTERNATIVE (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       76.6%; Score 45%; DB 6; Length 139; 85.3%; Pred. No. 1.6e-47; ive 1; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BY SIMILARITY.
INSULIN-LIKE GROWTH FACTOR IB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15612 MW; CDC0E8F19C261A2C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; U28070; AAA68952.1; -.
EMBL; U85271; AAB47484.1; -.
HSSP; P01343; 1GF1.
InterPro; IPR00079; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINA.
ProDom; PD001048; Insulin_IGF_relaxin; 1.
                                                                                                                                                                                                                139 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MUCH HIGHER GROWTH-PROMOTING ACTIVITY
-!- SUBCELLULAR LOCATION: SECRETED.
-!- ALTERNATIVE PRODUCTS: TWO ISOFORMS; IS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A.
D.
E PEPTIDE.
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PROSITE; PS00262; INSULIN; UNKNOWN_1.
Insulin family; Growth factor; Signal.
                                                                                                PRT;
                                                                           CAPLKPAKSARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE=LIVER;
MEDLINE=97013467; PubMed=8860303;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BY
BY
BY
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Matches 87; Conservative
                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9796;
                                                                                                                                                                                                                                                                                                                                  (FRAGMENTS).
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NON_TER
SEQUENCE
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DISULFID
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                                                                                                                                                                                                                                  P79167;
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                                                                           61
                                                                                                              89
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Gaps

SMART; SM00078; IlGF; 1.

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NCBI_TaxID=9103;
                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                   1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus. NCBI_TaxID=74940;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
STRAIN=BIG QUALICUM RIVER, B.C.; TISSUE=LIVER;
MEDLINE=9347592; PubMed=7683374;
Mallis A.E., Devlin R.H.;
"Duplicate insulin-like growth factor-I genes in salmon display alternative splicing pathways.";
Mol. Endocrinol. 7:409-422(1993).
                                                                                                                                                                                                                                                                                                                              .;
0
                                                                                                                                                                                                                                                                                                       Length 153;
                                INSULIN-LIKE GROWTH FACTOR-I. 5AF1E5B8D13C70B5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Subnitted (OCT-1994) to the EMBL/GenBank/DDBJ databases.
-!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Oncorhynchus tschawytscha (Chinook salmon) (King salmon)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
                                                                                                                                                                                                                                                                                                                 Pred. No. 4e-43;
3; Mismatches 6;
                                                                                                                                                                                                                                                                                                      DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
STRAIN-BIG QUALICUM RIVER, B.C.; TISSUE-LIVER;
Devlin R.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         161 AA
                                                                                                                                                                      PRINTS; PRO0276; INSCLINA.
PRINTS; PRO0277; INSCLINA.
PRINTS; PRO01079; INSULINB.
SMART; SM00078; ILGF, 1.
PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                 InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR000739; Insulin_IGF_relaxin_Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PD001048; Insulin_IGF_relaxin; 1.
                                                                                                                                                                                                                                                                                                      Score 422;
                                                                                                                                                                                                                                                     POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                  109 CAPIKPPKSARSVRAQRHTDMPKAQK 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                   61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                    48 PC
118 IN
17295 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INSULIN-LIKE GROWTH FACTOR-I.
                                                                                                                                                                                                                                                                                                    70.6%;
89.5%;
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Best Local Similarity 89.59
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HSSP; P01343; 1GF1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                   SIGNAL 1
CHAIN 49
SEQUENCE 153 AA;
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                                                                                                                                                                                                                                        Signal.
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                                                                                                  1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19 GPETLCGAELVDTLQFVCGERGFYFSRPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY 78
                                                                                                                                                                                                                                                                                                                                                                                                      01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 10), Last annotation update)
101-DEC-2001 (TrEMBLrel. 10), Last annotation update)
1NSULIN-LIKE GROWTH FACTOR I PRECURSOR (FRAGMENT).
Salmo salar (Atlantic salmon).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Salmo.
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                                                   DB 13; Length 161;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 145;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  POTENTIAL.
INSULIN-LIKE GROWTH FACTOR I.
                                    67.5%; Score 403.5; DB 13; Leuyu...
72.0%; Pred. No. 7.2e-41;
"":matches 15; Indels
                                                                                                                                                                105 CAPVKSGKAARSVRAQRHTDMPRTPK-KPLSGNSHTSCKEVHQKNSS 150
                                                                                                                                                   61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNT--KSQRRKGST 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17; Indels
                       161 AA; 17763 MW; A5A85D121377BF67 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <1 18 POTENTIAL.
19 >88 INSULIN-LIKE GROWTH FACTOF
145 145
145 AA, 15885 MW; 3D94EDF477268FC4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRR 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              67.1%; Score 401; DB 13; 72.3%; Pred. No. 1.3e-40; iive 11; Mismatches 17;
                                                                                                                                                                                                                                            145 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ā
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PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
ProDom; PD001048; Insulin_IGF_relaxin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR000739; Insulin_IGF_relaxin
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                                                                                                                                                                                                                                            PRT;
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             PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SMART; SM00078; I1GF; 1.
PROSITE; PS00262; INSULIN; 1.
                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity 72.38
Matches 73; Conservative
                                                                                                                                                                                                                                          PRELIMINARY;
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                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=8030;
                                                  Query ...
Best Local Similar
                       SEQUENCE
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SEQUENCE
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SIGNAL
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Q91162;
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45 GPETLCGAELVDTLQFVCGERGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY 104
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=94296559; PubMed=8024699;
Kavasan V.M., Grebenjuk V.A., Koval A.P., Skorokhod A.S.,
Roberts C.T. Jr., Leroith D.;
"Isolation of a second nonallelic insulin-like growth factor I gene from the salmon genome.";
DNA CALL Biol. 13:555-59(1994).
-i- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
NCBI_TaxID=8018;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-AUG-1998 (TrEMBLrel. 07, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I.1 PRECURSOR (IGF-I.1) (SOMATOMEDIN).
                                               Wallis A.E., Devlin R.H.; "Duplicate insulin-like growth factor-I genes in salmon display alternative splicing pathways."; Mol. Endocrinol. 7:409-422(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 188;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
-!- SUBCELLULAR LOCATION: SECRETED.
-!- SIMLARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
EMBL; AF0652216, AAC18833.1; -.
HSSP; P01343; 1GF1.
InterPro; IPR000739; Insulin_IGF_relaxin.
                                                                                                                                                                                                                                                                                                          Devlin R.H.;
Submitted (SEP-1994) to the EMBL/GenBank/DDBJ databases.
-1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
EMBL; U15960, AAA67266.1; -.
EMBL; U14556, AAA67263.1; -.
HSSP; P01343; IGF1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17; Indels
                                                                                                                                                                                                                         Submitted (OCT-1994) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20782 MW; F4D705BA811024B8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                105 CAPVKSGKAARSVRAQRHTDMPRTPKVSTAVQNVDRGTERR 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRR 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  67.1%; Score 401; DB 13; 72.3%; Pred. No. 1.7e-40;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11; Mismatches
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PRINTS; PRO0277; INSULINA.
PRODOM; PRO01079; INSULINB.
SMART; SM00078; IIGF, 1.
PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
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                           MEDLINE=93247592; PubMed=7683374;
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    PRELIMINARY;

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                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                TISSUE=LIVER;
                                                                                                                                                                                                                                                                                            TISSUE-LIVER;
                                                                                                                                                                                                       Devlin R.H.;
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P81268;
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                                                                                                                                                                                                                                                                                   Cao Q.P, Duguay S.J, Plisetskaya E., Steiner D.F., Chan S.J.; "Nucleotide sequence and growth hormone regulated expression of salmon insulin-like growth factor I mRNA."; Mol. Endocrinol. 3:2005-2010(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19 GPETLCGAELVDTLQFVCGERGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY 78
                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIINE=93024477; PubMed=1406698;
Duguay S.J, Park L.K., Samadpour M., Dickhoff W.W.;
"Nucleotide sequence and tissue distribution of three insulin-like
                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
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Bukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
NCBI_TaxID=74940;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOI. Endocrinol. 6:1202-1210(1992).
-!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
EMBL; M81913; AAA49413.1; -.
HSSP; P01343; 1GF1.
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INSULIN-LIKE GROWTH FACTOR
R -> X (IN REF. 1).
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01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I PRECURSOR (FRAGMENT).
Oncorhynchus kisutch (Coho salmon).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        . Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation updat.
INSULIN-LIKE GROWTH FACTOR-I.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR000739; Insulin_IGF_relaxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Probom; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IlGF; 1.
PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            growth factor I prohormones in salmon.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                               MEDLINE-90190659; PubMed-2628735;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16968 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF00049; Insulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
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19 7
73
155
155 AA;
                                                                                                                                                                                                                    SEQUENCE FROM N.A.
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                                                                                                                                                                              NCBI_TaxID=8019;
                                                                                                                                                                                                                                           TISSUE-LIVER;
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SEQUENCE
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091965;
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RESULT 11

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Gaps

us-09-852-261-2.rspt

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62 GPETLCGAELVDTLQFVCGDRGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY 121
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SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             45 GPETLCGAELVDTLQFVCGERGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Ostariophysi;
Cypriniformes; Cyprinidae; Cyprinus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                         Probom; PD01048; Inculin_IGF_relaxin; 1.
SMART; SM00078; ILGF; 1.
PROSITE; PS00262; IRSULIN; 1.
Insulin family; Growth factor; Plasma; Multigene family; Signal.
SIGNAL
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                                                                                                                                                                                                                                                                                                                                                                              Length 188;
                                                                                                                                                                       INSULIN-LIKE GROWTH FACTOR I.1
                                                                                                                                                                                                                                                                                                                                                                                                                  17; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18; Indels
                                                                                                                                                                                                                                                                                                                                             F4CEB6D05E0F24B8 CRC64;
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19, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        105 CAPVKSGKAARSVRAQRHTDMPRTPKISTAVQNVDRGTERR 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRR 101
                                                                                                                                                                                                                                                                                                                                                                              ; Score 401; DB 13;
; Pred. No. 1.7e-40;
11; Mismatches 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    178 AA
                                                                                                                                                                                                                                                                                   SIMILARITY.
SIMILARITY.
SIMILARITY.
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                                                                                                                                                     SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Interpro: IPP000739; Insulin_IGF_relaxin.
Pfam: PF00049; Insulin: 1.
PRON0277: INSULINB.
PRODOM: PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
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                                                                                                                                                                                                                                                                                                                             BY
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SEQUENCE 178 AA; 19687 MW;
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                                                                                                                                                                                                                                                                                                                                             20792 MW;
                                                                                                                                                                                                                                                                                                                                                                                67.18;
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 Pfam; PF00049; Insulin; 1
                   PRINTS; PR00276; INSULINA PRINTS; PR00277; INSULINB
                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
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Matches 73; Conserv
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                                                                                                                                                                                                                                                                                                                                         188 AA;
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Q9IBIO
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Cao O.P. Duguay S.J. Plisetskaya E., Steiner D.F., Chan S.J.; "Nucleotide sequence and growth hormone regulated expression of salmon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2; Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                  01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
01-DEC-2001 (TREMBLrel. 19, Last annotation update)
1NSULIN-LIKE GROWTH FACTOR I PRECURSOR (FRAGMENT).
Oncorhynchus kisutch (Coho salmon).
Actinopterygii; Neopterygii; Teleostei; Buteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 116;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
61 CAPLKPAKSARSVRAQRHTDMPKT-QKYQPPSTNKNTKSQRRKGST 105
                       122 CAPVKPGKTPRSVRAQRHTDSPRTAKKPLPGQSHSSYKEVHQKNSS 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <1 18 POTENTIAL.
19 >88 INSULIN-LIKE GROWTH FACTOI
116 116
116 AA; 12697 MW; C5F378915179D89D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q91231 PRELIMINARY; PRT; 149 AA.
091231;
01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             66.7%; Score 399; DB 13; 75.5%; Pred. No. 1.7e-40; ive 10; Mismatches 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 CAPLKPAKSARSVRAQRHTDMPKTQK--YQPPSTNKNT 96
                                                                                                                                                            116 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam: PF00049; Insulin. 1
PRINTS: PR00276; INSULINA.
PRINTS: PR00277; INSULINB.
ProDom; PD001048; Insulin_IGF_relaxin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               insulin-like growth factor I mRNA.";
Mol. Endocrinol. 3:2005-2010(1989).
                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE-LIVER;
MEDLINE-90190659; Pubmed-2628735;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=93024477; PubMed=1406698;
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PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 75.2.,
-hes 74; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; M81911; AAB59947.1;
HSSP; P01343; 1GF1.
                                                                                                                                                            PRELIMINARY;
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Oncorhynchus tschawytscha (Chinook salmon) (King salmon).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
                                                                                                                                                                       SEQUENCE FROM N.A.
STRAIN-BIG QUABLICUM RIVER, B.C.; TISSUE-LIVER;
MEDLINE-91247552; PubMed-7683374;
Wallis A.E., Devlin R.H.;
"Duplicate insulin-like growth factor-I genes in salmon display alternative splicing pathways.";
Mol. Endocrinol. 7:409-422(1993).
                                                                                                                                                                                                                                                                                                                         STRAIN=BIG QUALICUM RIVER, B.C.; TISSUE=LIVER;
STRAIN=BIG QUALICUM RIVER, B.C.; TISSUE=LIVER;
Devilin R.H.;
Submitted (OCT-1994) to the EMBL/GenBank/DDBJ databases.
-: SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-: STMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
R EMBL; U15962; AAA67268.1; -.
R HSSP; PO1343; IGF1.
R RSSP; PO1343; IGF1.
R RSSP; PR00279; Insulin_IGF_relaxin.
R Pfam; PR00277; INSULINB.
R PRODED: PR001048; Insulin_IGF_relaxin; 1.
SMART; SM00778; INSULIN;
R PROSITE; PS00262; INSULIN; 1.
R PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ouery Match 66.7%; Score 399; DB 13; Length 149; Best Local Similarity 75.5%; Pred. No. 2.3e-40; Matches 74; Conservative 10; Mismatches 12; Indels
01-DEC-2001 (TrEMBLrel. 19, Last annotation update) INSULIN-LIKE GROWTH FACTOR-I.
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Arch completed: October 25, 2002, 15:58:45 Job time: 22.5422 secs

105 CAPVKSGKAARSVRAQRHTDMPRTPKEVHQKNSSRGNT 142 61 CAPLKPAKSARSVRAQRHTDMPKTQK -- YQPPSTNKNT 96

1;

2; Gaps

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1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60

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09/862,261

1 GPETLCGAELVDALQFVCGD.....TNKKMKSQRRRKGSTFEEHK 111 US-09-852-261-6 Title: , Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

747574 seqs, 111073796 residues :pəqɔ:

747574 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database :

1: /SIDSI/gcgdata/geneseq/geneseqp-embl/AA1980.DAT:*
2: /SIDSI/gcgdata/geneseq/geneseqp-embl/AA1981.DAT:*
4: /SIDSI/gcgdata/geneseqf_embl/AA1981.DAT:*
4: /SIDSI/gcgdata/geneseqf_embl/AA1981.DAT:*
5: /SIDSI/gcgdata/geneseqf_embl/AA1981.DAT:*
5: /SIDSI/gcgdata/geneseqf_embl/AA1981.DAT:*
6: /SIDSI/gcgdata/geneseqf_embl/AA1981.DAT:*
7: /SIDSI/gcgdata/geneseqf_embl/AA1980.DAT:*
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8: /SIDSI/gcgdata/geneseqf_embl/AA1980.DAT:*
9: /SIDSI/gcgdata/geneseqf_embl/AA1980.DAT:*
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11: /SIDSI/gcgdata/geneseqf_embl/AA1991.DAT:*
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17: /SIDSI/gcgdata/geneseqf_embl/AA1992.DAT:*
18: /SIDSI/gcgdata/geneseqf_embl/AA1992.DAT:*
19: /SIDSI/gcgdata/geneseqf_embl/AA1992.DAT:*
21: /SIDSI/gcgdata/geneseqf_embl/AA1992.DAT:*
22: /SIDSI/gcgdata/geneseqf_embl/AA2000.DAT:* A_Geneseq_032802:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Description	Rabbit IGF-I isofo	Rabbit insulin lik	Human IGF-I isofor	. Sequence of pre-pr	Rat IGF-I isoform	Rabbit liver-type	Human liver-type I	Human insulin-like	Insulin-like growt	Human IGF-1. Homo	Human IGF-I protei
	ID	AAE02449	AAW23301	AAE02447	AAP70277	AAE02448		AAE02450	AAU09067	AAR83803	AAW69733	AAW57882
	DB	22	18	22	æ	22	22	22	22	16	19	19
	Query Match Length DB	111	121	110	195	111	105	105	137	153	153	153
۴	Query Match	100.0	100.0	95.1	89.0	85.0	7.7.	77.2	77.2	77.2	77.2	77.2
	Score	602	602	572.5	536	512	468	465	465	465	465	465
	Result No.	н	7	9	4	2	9	7	ω	σ	10	11

Human insulin like Rabbit liver-type	Human prepro-somat	Goat Insulin like	Rat liver-type IGF	liver-type		2	ligand		Rainbow trout insu	Flatfish insulin-l	Recombinant botuli	Sequence of human	Sequence of oxidat	Sequence of human	New insulin-like g	Insulin-like growt	hIGF-I. Homo sapi	Peptide derived fr	Human IGF-I peptid	Sequence of insuli	Human insulin-like	Insulin like growt	Wild type IGF-1 se	Recombinant insuli	Peptide derived fr	Human mature insul	Human insulin-like	Human insulin-like	Insulin like growt	Amino acid sequenc	Native human insul
AAW23302 AAE02456	AAP60578	AAR4 0844	AAE02451	AAE02531	AAY98482	AAY59027	AAU04272	AAB45835	AAR88089	AAR72472	AAW56011	AAP40034	AAP70414	AAP71539	AAP91502	AAR36846	AAR41774	AAR43606	AAR48590	AAR55275	AAR75657	AAR86874	AAR87744	AAR89949	AAW33907	AAW12342	AAB12769	AAB12772	AAB09616	AAY8487.1	AAY88577
18 22	۲.	14	22	22	21	21	22	22	17	16					0	14	14	14	15	15	16	17		17	18	18	21	21	21	21	21
156	119	154	105	105	78	78	78	78	176	186	953	70	70	70	70	70	70	70	70	70	70	70	70	20	70	70	70	70	70	70	70
77.2	76.1	75.7	8.69	9	67.9	67.9	67.9	7	66.1	63.9	63.6	63.5	63.5	63.5	63.5	m	63.5	•	•	•	63.5		63.5	63.5		63.5	63.5	63.5	63.5	63.5	63.5
465 462	458	456	4	420	409	409	409	409	398	384.5	383	382	382	382	382	382	382	382	382	382	382	382	382	382	382	382	382	382	382	382	382
12	14	۲. L	17	18	19	20	21	22	23	24	25	56	27	28	29		31	32	33	34	35	36		38	39	40	41	42	43	44	45

ALIGNMENTS

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The present invention relates to use of mechano-growth factor (MGF),
an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a
medicament for the treatment of neurological disorder. The MGF is capable
of reducing motoneurone loss by 20% or greater in response to nerve
avulsion, and effects motoneurone rescue, preferably adult motoneurone
crescue. The MGF polynucleotide and polypeptide are useful in the
communicature of a medicament for the treatment of a neurological disorder,
including a disorder of motoneurones and/or neurodegenerative disorder,
communicature of a medicament for the treatment of a neurological disorder,
including a disorder of motoneurones and/or neurodegenerative disorder,
communicature of a medicament for the treatment of a neurological disorder.
CC any amyotrophic lateral sclerosis, spinal muscular atrophy,
communicative of motoneurone lesion or nerve damage, an
complement of the politic syndrome, a disorder caused by exposure to a toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an
complement neuropathies, Alzheimer's disease and Parkinson's disease.
The present sequence is rabbit GF-I isoform MGF. MGF is a muscle
isoform having extracellular (EC) domain, hence also referred as
complement of IGF-I exons 4, 5 and 6 in the reading frame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                 Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of medicament for the treatment of neurological disorder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             growth factor 1; IGF-1; Ec peptide; muscle disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 602; DB 22; Length 111; 100.0%; Pred. No. 9.9e-55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRRKGSTFEEHK 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRRKGSTFEEHK 111
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rabbit insulin like growth factor 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAW23301 standard; Protein; 121 AA
                                                                                            Claim 4; Page 54; 66pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 heart; neuromuscular disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           96GB-0005124.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  111 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N-PSDB; AAT84893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Insulin like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO9733997-A1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-MAR-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Soldspink G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18-SEP-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
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mechano-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; poliomyelitis; post-polio syndrome; toxin; motoneurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease.
                                                                                                                  A use of insulin like growth factor I (IGF-1) has been developed, and is characterised by the presence of the Ec peptide, or a functional equivalent, in the treatment or therapy of a human or animal. The IGF-1 polypeptide can be used to treat muscular disorders, e.g. buchenne or Becker muscular dystrophy, autosomal dystrophies and related progressive skeletal muscle weakness and wasting, muscle atrophy in ageing humans, spinal cord injury induced muscle atrophy and neuromuscular diseases, and cardiac disorders, e.g. diseases where promotion of cardiac muscle protein synthesis is a beneficial treatment, cardiomyopathies and acute heart failure or insult, specifically myocarditis or myocardial infarction. It can also be used to promote bone fracture healing and maintenance of bone in old age. The present sequence represents rabbit IGF-1 used in the present specification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                     peptide – to treat humans or animals, particularly muscle disorders,
heart conditions or neuromuscular diseases
  Use of insulin like growth factor I characterised by presence of
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Use of mechano-growth factor, an isoform of Insulin-like Growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 121;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRKKGSTFEEHK 111
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human IGF-I isoform mechano-growth factor (MGF) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; IGF-I isoform; Insulin-like Growth Factor-I; MGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ouery Match 100.0%; Score 602; DB 18;
Best Local Similarity 100.0%; Pred. No. 1.1e-54;
Matches 111; Conservative 0; Mismatches 0;
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                                                                        Disclosure; Fig 3; 33pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Johnson I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2001-355620/37.
                                                                                                                                                                                                                                                                                                                                                                                                           121 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-PSDB; AAD06398.
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qq
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Gaps

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Sequence of pre-pro-insulin-like growth factor 1B (ppIGF-1B).
                                                                                                                                                                                                                                                                                                                                61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQ-RRKGSTFEEHK 110
                                                                                                                                                                                                                                                                                                                        61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRKKGSTFEEHK 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        recombinant DNA procedures for use as growth promoters for enhancing lactation, for stimulating cell proliferation etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New pre-pro-insulin-like growth factor-1 protein - obtd. by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Growth promoter; lactation enhancer;
       Claim 4; Page 50-51; 66pp; English.
                                                                                                                                                                                                                                                                                                                                                                                       AAP70277 standard; protein; 195 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 11; Fig 6; 59pp; English
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                                                                                                                                                                                                                                                       Local Similarity 96.4 tes 107; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rotwein PS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1987-200203/29
                                                                                                                                                                                                                           110 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          06-JAN-1987;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20-NOV-1986;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Krivi GG,
                                                                                                                                                                                                                                                                                                                                                                                                         AAP70277;
                                                                                                                                                                                                                            Sequence
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Matches
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an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a madicament for the treatment of neurological disorder. The MGF is capable of reducing motioneurone loss by 20% or greater in response to nerve avulsion, and effects motioneurone rescue, preferably adult motioneurone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mechano-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; poliomyelitis; post-polio syndrome; toxin; motoneurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder -
               A 42 base oligonucleotide corresponding to the DNA sequence encoding amino acids 10 to 23 of mature human IGF-I was synthesized (AAN70437). The radiolabbled 42 mer was then employed to screen for IGF-I containing DNA sequences in a human liver CDNA library. Insulinlike growth factors-IA and -IB CDNAS were isolated from a human CDNA library by using lambdagt 11 (AAN70435, AAN70436). The human IGF-I genomic gene was isolated and mapped. It encodes at least two preproinsulin-like growth factor-I proteins. An essentially pure proproinsulin-like growth factor-I protein comprising the sequence of amino acids shown in Figure six is claimed (AAP70277).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       49 GPETLCGAELVDALQFVCGDRGFYFNKPIGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                          GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              present invention relates to use of mechano-growth factor (MGF),
                                                                                                                                                                                                                                                                                                                                                           Length 195;
                                                                                                                                                                                                                                                                                                                                                      Score 536; DB 8; Length 19
Pred. No. 1.2e-47;
2; Mismatches 2; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRR 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 4; Page 52; 66pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                   2;
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                                                                                                                                                                                                                                                                                                                                                      89.0%;
96.1%;
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                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                        Sequence 195 AA;
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1;
                                                                                                                                                                                                                                         including a disorder of motometrones and/or neurodegenerative disorder, e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive spinal muscular atrophy, infantile or juvenile muscular atrophy, progressive spinal muscular atrophy, infantile or juvenile muscular atrophy, poliomyelitis or post-polio syndrome, a disorder caused by exposure to a toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an injury that affects motoneurones, motoneurone loss associated with aging, peripheral neuropathies, Alzhelmer's disease and Parkinson's disease. The present sequence is human IGF-I isoform MGF is a muscle isoform having extracellular (EC) domain, hence also referred as IGF-I EC. The MGF protein comparises amino acid sequences encoded by nucleic acid sequence of IGF-I exons 4, 5 and 6 in the reading frame
                                                                  The present invention relates to use of mechano-growth factor (MGF), an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a medicament for the treatment of neurological disorder. The MGF is capable of reducing motoneurone loss by 20% or greater in response to nerve avulsion, and effects motoneurone rescue, preferably adult motoneurone rescue. The MGF polynucleotide and polypeptide are useful in the manufacture of a medicament for the treatment of a neurological disorder,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 22; Length 110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cell proliferation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              95.1%; Score 572.5; DB 2 96.4%; Pred. No. 1.1e-51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1; Mismatches
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us-09-852-261-6.rag

Mon Oct 28

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manufacture of medicament for the treatment of a neurological disorder, including a disorder of metoneurones and/or neurodegenerative disorder, including a disorder of metoneurones and/or neurodegenerative disorder, spinal muscular atrophy, progressive spinal muscular atrophy, infantile or juvenile muscular atrophy, progressive poliomyelitis or post-polio syndrome, a disorder caused by exposure to a toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an injury that affects motoneurones, motoneurone lesion or nerve damage, an injury that affects motoneurones, motoneurone lesion or nerve damage, peripheral neuropathies, Alzheimer's disease and Parkinson's disease. Progressit sequence is rat IGF-I isoform MGF. MGF is a muscle isoform having extracellular (Ec) domain, hence also referred as IGF-I-Ec. The MGF protein compatises amino acid sequences encoded by motoleic acid sequence of IGF-I exons 4, 5 and 6 in the reading frame
The MGF polynucleotide and polypeptide are useful in the
                                                                                                                                                                                                                                                                                                                                                                                                                                             of MGF.
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111 AA; Sequence

; 0 Gaps ; 0 Length 111; Score 512; DB 22; Length 11 Pred. No. 2e-45; 3; Mismatches 12; Indels 85.0%; Query Match
Best Local Similarity 86.5

1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60

q ò

AAE02452 standard; Protein; 105 AAE02452; RESULT 6 AAE02452

AA.

10-AUG-2001 (first entry)

Rabbit liver-type IGF-I isoform (L.IGF-I) protein.

Rabbit; IGF-I isoform; Insulin-like Growth Factor-I; MGF;

mechano-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; pollomyellitis; post-pollo syndrome; toxin; motomeurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease; liver; L.IGF-I.

Oryctolagus cuniculus.

WO200136483-A1.

25-MAY-2001.

15-NOV-2000; 2000WO-GB04354

99GB-0026968 15-NOV-1999; (UNICO) UNIV COLLEGE LONDON

Johnson I; Goldspink G,

WPI; 2001-355620/37. N-PSDB; AAD06405.

Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of medicament for the treatment of neurological disorder

Disclosure; Page 60-61; 66pp; English.

The present invention relates to use of mechano-growth factor (MGF),

an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a medicament for the treatment of neurological disorder. The MGF is capable of reducing motoneurone loss by 20% or greater in response to nerve avulsion, and effects motoneurone rescue, preferably adult motoneurone cavilsion, and effects motoneurone rescue, preferably adult motoneurone careament for the treatment of a neurological disorder, including a disorder of motoneurones and/or neurological disorder, or any otrophic lateral sclerosis, spinal muscular atrophy, infantile or juvenile muscular atrophy, colimantal atrophy, infantile or juvenile muscular atrophy, colimantal atrophy, infantile or juvenile muscular atrophy, colimantal atrophy, and motoneurone trauma, a motoneurone lesion or nerve damage, and injury that affects motoneurones, motoneurone loss associated with aging, autosomal or sex-linked muscular dystrophy, diabetic neuropathy, cautosomal or sex-linked muscular dystrophy, diabetic neuropathy, peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The present sequence is rabbit liver-type IGF-I isoform (L.IGF-I).

The IndF-I protein comprises amino acid sequences encoded by and 6. ó; Note: The present sequence (SEQ ID NO: 14) is stated as being the same as that shown in figure 10 (AAE02456) of the specification. However Gaps 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60 ö Length 105; Indels ö Score 468; DB 22; Pred. No. 6.6e-41; Mismatches 61 CAPLKPAKAARSVRAQRHTDMPKTQK 86 77.7%; Scc... 100.0%; Pre 0; } it differs at few positions. Conservative Query Match Best Local Similarity Matches 86; Conserv 105 AA; Seguence 61 Ω δ q ò

RESULT 7

AAE02450 standard; Protein; 105 AA

AAE02450;

(first entry) 10-AUG-2001

Human liver-type IGF-I isoform (L.IGF-I) protein.

mechano-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; poliomyelitis; post-polio syndrome; toxin; motomeurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease; liver; L.IGF-I. Human; IGF-I isoform; Insulin-like Growth Factor-I; MGF;

Homo sapiens.

WO200136483-A1

25-MAY-2001

15-NOV-2000; 2000WO-GB04354

99GB-0026968 15-NOV-1999;

(UNLO) UNIV COLLEGE LONDON. Goldspink G,

WPI; 2001-355620/37. N-PSDB; AAD06403.

۵ Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of

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SSXS

δ g ò 원

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burn; wound; brain metastasis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Insulin-like growth factor 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        77.2%;
98.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15-FEB-1996 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       90..110
/label= A
111..118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sest Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  137 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAR83803;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Domain
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Key
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention relates to use of mechano-growth factor (MGF),
an Instlin-like Growth Factor-I (IGF-I) isoform in the manufacture of a
medicament for the treatment of neurological disorder. The MGF is capable
of reducing motoneurone loss by 20% or greater in response to nerve
avulsion, and effects motoneurone rescue, preferably adult motoneurone
crescue. The MGF polymorlectide and polypeptide are useful in the
cmanufacture of a medicament for the treatment of a neurological disorder,
including a disorder of motoneurones and/or neurodegenerative disorder,
including a disorder of motoneurones and/or neurodegenerative disorder,
cs. 9., amyotrophic lateral sclerosis, sphinal muscular atrophy,
cspinal muscular atrophy, infantile or juvenile muscular atrophy,
coliomyelitis or post-polio syndrome, a disorder caused by exposure to a
coliomyelitis or post-polio syndrome, a disorder caused by exposure to
coliomyelitis or post-polio syndrome, a disorder caused by exposure
coliomyelitis or post-polio syndrome, a disorder caused by exposure
coliomyelitis or post-polio syndrome, a disorder caused by exposure
coliomyelitis or post-polio syndrome, a disorder caused by exposure
coliomyelitis or post-polio syndromeurone loss associated with aging,
autosomal or sex-linked muscular dystrophy, diabetic neuropathy,
peripheral neuropathies, Alzheimer's disease and parkinson's disease.
The present sequence is human liver-type IGF-I isoform (L.IGF-I).
The LIGF-I protein comprises amino acid sequences encoded by
colour descular dystrophy and 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GPETICGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; long-term memory protein; LTM; insulin-like growth factor; neuroleptic; anticonvulsant; nootropic; neuroprotective; IGF1; ecebroprotective; drug discovery; therapeutic profiling; learning disability; memory impairment; brain injury; epilepsy; mental retardation; senile dementia; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                77.2%; Score 465; DB 22; Length 105; 98.8%; Pred. No. 1.3e-40; ive 1; Mismatches 0; Indels
medicament for the treatment of neurological disorder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human insulin-like growth factor, IGF1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAU09067 standard; Protein; 137 AA
                                        Disclosure; Fig 8; 66pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (UYBR-) UNIV BROWN RESEACH FOUND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (HUGH-) HUGHES HOWARD MED INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            02-APR-2001; 2001WO-US10661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31-MAR-2000; 2000US-193614P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity 98.8
Matches 85; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alberini CM, Bear MF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2001-626335/72.
N-PSDB; AAS14695.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            105 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200174298-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19-DEC-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAU09067;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAU09067
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The inversion features to modulate that modulates the activity of animal comprises treating with an agent that modulates the activity of one or more of genes from zif268, insulin-like growth factor (IGF), curre inversion of genes from zif268, insulin-like growth factor (IGF), curre inversion of genes from zif268, insulin-like growth factor (IGF), curred to the comparison of the method is useful for conducting a drug and/or target discovery business, which comprises conducting a drug and/or target discovery business, which comprises conducting therapeutic profiling of the agents (or their analogues) identified, for efficacy and toxicity in animals, and comprises conducting the preparation including one or more agents of analogues) identified aparameceutical preparation including one or more agents of a third party the rights for further drug development of the contribution and additional step of establishing a distribution system for distributing the preparation for sale and may optionally include establishing a sales group for marketing the preparation. A pharmaceutical composition containing the agent is useful for enhancing memory consolidation in an animal, or for augmenting learning and memory, or otherwise for enhancing the functional performance of central nervous system neurons, where the agent is a camp elevating agent (agenist) continuating disabilities, memory impairment e.g. diseases associated with learning disabilities, memory impairment e.g. diseases associated with learning disabilities, memory impairment e.g. clue to toxicant exposure brain injury, epilepsy, mental retaring in children and senile dementia, including Alzhelmer's disease. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
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asthma;
                                                                                                                                                                                                                   The invention relates to modulating long term memory consolidation in an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
an agent that modulates activity of one or more genes from zif268, insulin-like growth factor, glutamate receptor 2, c/EBPbeta and VGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      33 GPETLCGAELVDALQFVCGDRGFYFNKPIGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
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autophosphorylation; cellular growth; proliferation; restenosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 465; DB 22;
Pred. No. 1.8e-40;
1; Mismatches 0;
                                                                                                                              Disclosure; Page 90-91; 100pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
49..118
/label= mature peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          49..77
/label= B domain
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/label= C domain
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IGF-1; insulin-like growth factor I; skeletal alpha-actin gene promoter; muscle atrophy; diabetes; osteoporosis; growth disorder; therapy; AIDS; Chacot-marie-tooth disease; atherogenesis; haemophilia; neuropathy.
                                                                                                                                                                                                                                                                                                                                                           mammals. The method comprises delivering a nucleic acid vector for the expression of a growth factor or neurotrophic factor in a tissue or tissues. The present sequence represents human IGF-1 (insulin-like growth factor 1) which is used in the method of the invention. Due to the growth and stimulatory effects of growth factors and neurotrophic factors, introducing these factors to degenerated muscles in the urinary system can improve UI by enhancing both their integrity and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                         A method has been developed of treating urinary incontinence (UI) in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                               Treatment of urinary incontinence - by delivering nucleic acid vector for expression of growth factor or neurotrophic factor in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          77.2%; Score 465; DB 19; Length 153; 98.8%; Pred. No. 2e-40; 1. Mismatches 0; Indels (
                                                                                                                                                                                                                                                                                              Claim 12d; Page 108-109; 117pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      109 CAPLKPAKSARSVRAQRHTDMPKTQK 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Schwartz R;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAW57882 standard; Protein; 153 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (BAYU ) BAYLOR COLLEGE MEDICINE. (GENE-) GENEMEDICINE INC.
                   97US-0036862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           97WO-US21852
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                             (GENE-) GENEMEDICINE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 77.2
Best Local Similarity 98.8
Matches 85; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Coleman M, Demayo FJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human IGF-I protein.
                                                                                                                                                WPI; 1998-437184/37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1998-333339/29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                neural innervation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     153 AA;
                                                                                                                                                                      N-PSDB; AAV50425
                     04-FEB-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9824922-A1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01'-DEC-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        02-DEC-1996;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11-JUN-1998.
                                                                                                        Coleman M;
                                                                                                                                                                                                                                                         tissue(s)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                       The amino acid sequence of the insulin-like growth factor 1 pre-protein. Processing of the protein results in a 70 amino acid mature protein. The mature protein is split into 4 domains: the B domain has strong homology to the B chain of insulin, the A domain similarly has homology to the A chain of insulin. These domains are separated by a C domain and the mature protein is terminated by a D domain at the C-terminus. The D domain sequence was used to synthesis peptides (AARB3801-2) that chains are separated by a C domain and induces and the IGF-1 receptor (IGF-1R) via the D domain and induces activation of the IGF-1R by autophosphorylation of the IGF-1R.

The synthetic peptides are useful as inhibitors of IGF-1 binding to IGF-1R and thus may be used in the treatment of disorders characterised by the synthesic peptides are useful as inhibitors of IGF-1 binding to by undesirable cell proliferation eg. cancer, restenosis, asthma, burns,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                         - useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; IGF-1; insulin-like growth factor 1; urinary incontinence;
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0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 465; DB 16; Length 153;
Pred. No. 2e-40;
1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                     synthetic IGF-1 analogues comprising 5-25 amino acids treatment of diseases associated with undesirable cell
                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Page 20-21; 28pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      109 CAPLKPAKSARSVRAQRHTDMPKTQK 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAW69733 standard; Protein; 153 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      neurotrophic factor.
/label- D domain
                                                                                                                                                                                                           (UYJE-) UNIV JEFFERSON THOMAS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          77.2%;
98.8%;
                                                                                                                        94WO-US14576
                                                                                                                                                                 93US-0167653
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              wounds or brain metastases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 98.8
Matches 85; Conservative
                                                                                                                                                                                                                                                    Baserga R, Jameson BA;
                                                                                                                                                                                                                                                                                              WPI; 1995-231515/30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     153 AA;
                                                                                                                                                                                                                                                                                                                                                                               proliferation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene therapy;
                                                                                                                        15-DEC-1994;
                                     WO9516703-A1
                                                                                                                                                                 15-DEC-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        04-FEB-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26-0CT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
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                                                                              22-JUN-1995
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
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RESULT 10 AAW69733

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Gaps

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This sequence is the human insulin-like growth factor I (IGF-I). The DNA can be used in the vector of the invention, for expression of a nucleic acid sequence in a cell, which comprises: (a) a nucleic acid cassequence in a cell, which comprises: (a) a nucleic acid cassette containing a sequence encoding IGF-I; (b) a 5' flanking region including one or more sequences necessary for expression of the nucleic acid cassette, including a promoter from a skeletal alpha-actin gene; (c) a linker connecting the 5' flanking region to a nucleic acid, the clinker having a position for inserting the nucleic acid cassette, and sequence oding sequence of a gene with which it is naturally associated, and (d) a 3' flanking region, including a 3' untranslated region or a 3' non coding region on both, where the 3' flanking region is 3' to the position for inserting the nucleic acid cassette and comprises a sequence from a growth hormone 3' upr. The vector can provide for efficient IGF-I expression, particularly in gene therapy. It can be used for the delivery of IGF-I for treating diseases such as muscle atrophy. C diabetes, neuropathy, osteoporosis, and growth disorders. They can be used contracting peripheral neuropathies resulting from diabetes, genetic disease such as Type I or Type II diabetes, genetic disease such as Type I or Type II diabetes, genetic disease such as Contracting peripheral neuropathies resulting from diabetes, and contracting peripheral neuropathies resulting from diabetes, genetic disease such as Type I or Type II diabetes, genetic disease such as Type I or Type II diabetes, genetic disease such as Type I or Type II diabetes, genetic disease such as Type I or Type II diabetes, genetic disease such as Type I or Type II diabetes, genetic disease such as Type I or Type II diabetes, genetic disease such as Type I or Type II diabetes, genetic disease such as Type I or Type II diabetes, genetic disease such as Type II or Type II diabetes, genetic disease such as Type II or Type II or Type II or Type II or Type I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      haemophilia, inflammation and side-effects from anti-cancer and anti-viral drugs. The vectors can also be used to create transgenic animals for research or livestock improvement.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cardiovascular, cerebrovascular, or peripheral vascular disease,
                                 New vector for expression of insulin-like growth factor-I - containing a skeletal alpha-actin gene promoter, IGF-I coding sequences and a 3' region from growth hormone 3'-UTR
                                                                                                                                                                                                  Disclosure; Fig 13; 115pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sednence
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0; 49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108 9 Gaps 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY DB 19; Length 153; 0; 77.2%; Score 465; DB 19 98.8%; Pred. No. 2e-40; iive 1; Mismatches 109 CAPLKPAKSARSVRAQRHTDMPKTQK 134 86 CAPLKPAKAARSVRAQRHTDMPKTQK Conservative Local Similarity hes 85; Conserv

Insulin like growth factor 1; IGF-1; Ec peptide; muscle disorder; heart; neuromuscular disease. Human insulin like growth factor 1 Ea isoform. ¥Ÿ. AAW23302 standard; Protein; 156 (first entry) Homo sapiens. 14-APR-1998

(UNLO) ROYAL FREE HOSPITAL SCHOOL MED. 97WO-GB00658. 96GB-0005124. W09733997-A1 11-MAR-1997; 11-MAR-1996; Goldspink G;

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A use of insulin like growth factor I (IGF-1) has been developed, and is characterised by the presence of the Ec peptide, or a functional equivalent, in the treatment or therapy of a human or animal. The IGF-1 polypeptide can be used to treat muscular disorders, e.g. Duchenne or Becker muscular dystrophy, autosomal dystrophies and related progressive skeleral muscle weakness and wasting, muscle atrophy in ageing humans, spinal cord injury induced muscle atrophy and neuromuscular diseases, and cardiac disorders, e.g. diseases where promotion of cardiac muscle protein synthesis is a beneficial treatment, cardiomyopathies and acute heart failure or insult, specifically myocarditis or myocardial infarction. It can also be used to promote bone fracture healing and maintenance of bone in old age. The present sequence represents human IGF-1 Ea isoform used in the present specification.
                                                                         Use of insulin like growth factor I characterised by presence of Ecpeptide - to treat humans or animals, particularly muscle disorders, heart conditions or neuromuscular diseases
                                                                                                                                                                                      Disclosure; Fig 4; 33pp; English.
1997-470877/43.
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52 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 111 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60 Length 156; Score 465; DB 18; Pred. No. 2e-40; 1; Mismatches 0; 112 CAPLKPAKSARSVRAORHIDMPKTOK 137 86 61 CAPLKPAKAARSVRAQRHTDMPKTQK 77.2%; 98.8%; Conservative Sest Local Similarity 85; Query Match Matches δ g ŏ pp

156 AA;

Sequence

0;

Rabbit, IGF-I isoform; Insulin-like Growth Factor-I; MGF; mechano-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; poliomyelitis; post-polio syndrome; toxin; motoneurone disorder; Rabbit liver-type IGF-I isoform (L.IGF-I) protein, alternative version. damage; autosomal muscular dystrophy; diabetic neuropathy sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease; liver; L.IGF-I. 10-AUG-2001 (first entry) AAE02456; nerve

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AAE02456 standard; Protein; 105

AAE02456

'note= "Encoded by GAG" /note= "Encoded by GAG" Location/Qualifiers (UNLO) UNIV COLLEGE LONDON. 15-NOV-2000; 2000WO-GB04354 Oryctolagus cuniculus Misc-difference 3 Misc-difference 9 WO200136483-A1 15-NOV-1999; 25-MAY-2001.

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1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDHRRLEMY 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The goat IGF precursor is useful for the preparation of IGF-1 which is used for growth of bone and the therapy of tumours. The IGF-1 precursor is prepared by inserting the coding sequence into an
                                                                                                                                                                                                                                                                                                                                                                                                                           prepared against DNA encoding the protein sequence may be used to detect the presence of the genes in a natural source. The probes may be used to detect mutations and/or deletions in humans suffering from growth deficiencies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Goat insulin-like growth factor I - useful for prepn. of insulin-like growth factor I used for growth of bone and tumour
                                                                                                                                                                                                                        Pre:pro insulin-like growth factors I and II - obtd. from the human genome by e.g. screening a cDNA library obtd. from human liver cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                          DNA probes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Goat Insulin like growth factor 1 (IGF-1) precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 458; DB 7;
Pred. No. 8.1e-40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Insulin; growth factor; bone; tumour therapy
                                                                                                                                                                                                                                                                                                                                                                                                          The sequence is human prepro-somatomedin-C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1; Mismatches
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                                                                                                                                                                                                                                                                                                                                                    Disclosure; Fig 1; 20pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    76.18;
97.78;
84US-0630557,
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                                                                                                                                                          WPI; 1986-042104/06.
N-PSDB; AAN60490.
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                                                     (CHIR-) CHIRON CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 84; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              119 AA;
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13-JUL-1984;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               02-DEC-1991;
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                                                                                                        Bell G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    75
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                                                                                                                                                                                                                                                                                                                                         an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a medicament for the treatment of neurological disorder. The MGF is capable of reducing motomeurone loss by 20% or greater in response to nerve avulsion, and effects motomeurone rescue, preferably adult motomeurone rescue. The MGF polynucleotide and polypeptide are useful in the manufacture of a medicament for the treatment of a neurological disorder, including a disorder of motomeurones and/or neurodegenerative disorder, e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive spinal muscular atrophy, infantile or juvenile muscular atrophy, progressive spinal muscular atrophy, progressive spinal muscular atrophy, infantile or juvenile muscular atrophy, progressive toxin, motomeurone trauma, a motomeurone lesion or nerve damage, an injury that affects motomeurones, motomeurone loss associated with aging, autosomal or sex-linked muscular dystrophy, diabetic neuropathy, automice and autosomal adversarial content of the second progressive and the se
                                                                                                                                                                                         Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            as SEQ ID NO:14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The present sequence is alternative version of rabbit liver-type IGF-I isoform (L.IGF-I) The L.IGF-I protein comprises amino acid sequences encoded by nucleic acid sequence of IGF-I exons 4 and 6.

Note: The present sequence is stated as being the same as SEQ ID NO:14 shown in sequence listing (AAE02452) of the specification. However
                                                                                                                                                          Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of medicament for the treatment of neurological disorder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                           The present invention relates to use of mechano-growth factor (MGF),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GPQTLCGAQLVDALQFVCGDRGFYFNRPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
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Pred. No. 2.7e-40;
2; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAP60578 standard; Protein; 119 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                      Disclosure; Fig 10; 66pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    76.78;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31-JUL-1991 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               84; Conservative
                         Goldspink G, Johnson I;
                                                                         WPI; 2001-355620/37.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    105 AA;
                                                                                                     N-PSDB; AAD06405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Somatomedin-C.
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Query Match

Matches

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Key Protein Protein

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Gaps

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expression vector, transforming a host cell with the expression vector, culturing the transformed cell and retrieving the \rm IGF-1 precursor from the culture supernatant.
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Sequence 154 AA;

Query Match 75.7%; Score 456; DB 14; Length 154; Best Local Similarity 96.5%; Pred. No. 1.7e-39; Matches 83; Conservative 1; Mismatches 2; Indels 0; Gaps

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Search completed: October 25, 2002, 15:57:10 Job time: 25.4096 secs

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Sequence 9, A
Sequence 1, A
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Sequence 11,
Patent No. 540
Sequence 41,
Sequence 41,
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1 GPETLCGAELVDALQFVCGD.....TNKKMKSQRRRKGSTFEEHK 111
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/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd
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US-08-920-720A-9

US-09-142-583A-11

US-09-142-583A-11

US-09-142-583A-11

US-09-142-141

US-08-142-141

US-08-148-171

US-08-148-171

US-08-148-171

US-08-148-171

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PCT-US93-11458-1
PCT-US95-08925-1
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Gapop 10.0 , Gapext 0.5
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Maximum DB seq length: 2000000000
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US-08-950-720A-9
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11 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Gaps
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                                                                                                                                                        RESULT 2
US-07-953-230A-10
; Sequence 10, Application US/07953230A
; Patent No. 5476779
; GENERAL INFORMATION:
; APPLICANT: CHEN, Thomas T
; APPLICANT: SHAMBLOTT, Michael J
; TITLE OF INVENTION: INSULIN-LIKE GROWTH FACTORS ISOLATED
; TITLE OF INVENTION: FROM RAINBOW TROUT
; NUMBER OF SEQUENCES: 12
; CORRESPONDENCE ADDRESS:
; CORRESPONDENCE ADDRESS:
                                                                                  61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRKGSTFEEHK 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               77.2%; Score 465; DB 1; Length 137; 98.8%; Pred. No. 6.3e-48; Live 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Burns, Doane, Swecker & Mathis
STREET: George Mason Bldg., Washington & Prince Sts.
CITY: Alexandria
STATE: Virginia
COUNTRY: United States
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note~ "Gap of 27 after 116."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/953,230A
FILING DATE: 30-SEP-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note= "Gap of 2 after 7."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: CTAIN-FEURY, Sharon E
REGISTRATION NUMBER: 36,113
REFERENCE/DOCKET NUMBER: 028755-010
TELECOMMUNICATION INFORMATION:
TELEFRAX: (703) 836-6620
TELEFRAX: (703) 836-6201
INFORMATION FOR SEQ ID NO: 10:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         93 CAPLKPAKSARSVRAQRHTDMPKTQK 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: United States
ZIP: 22313-1404
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: EM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
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TYPE: amino acid
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Best Local Similarity 98.89
Matches 85; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE: protein
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; OTHER INFORMATION:
US-07-953-230A-10
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OTHER INFORMATION:
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OTHER INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: Peptide
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Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        77.2%; Score 465; DB 3; Length 152; 98.8%; Pred. No. 7.1e-48; tive 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: Bradford A. Jameson and Renato Baserga TITLE OF INVENTION: IGF-1 Analogs
NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: Woodcock Washburn
ADDRESSEE: Kurtz Mackiewicz & No. 5473054ris
                                                                                                                                                                                                                                                                                                                                                                                                                                    OPERATING SYSTEM: DOS
SOFTWARE: FastSEO for Windows Version 2.0
CURRENT APPLICATION DATA:
Sequence 9, Application US/08950720A
Patent No. 6046028
GENERAL INFORMATION:
APPLICANT: Conklin, Darrell C.
APPLICANT: Lofton-Day, Catherine E.
APPLICANT: Lok, Si
APPLICANT: Lok, Si
APPLICANT: Jaspers, Stephen R.
TILLE OF INVENTION: INSULIN HOWOLOG
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/08/950,720A
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
                                                                                                                                                                                                                                    E: ZymoGenetics, Inc.
1201 Eastlake Avenue East
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Sawislak, Deborah A
REGISTRATION NUMBER: 37,438
REFERENCE/DOCKET NUMBER: 96-(
TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-442-6672
TELEFAX: 206-442-6672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: No. 6046028e
                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION FOR SEO ID NO: 9
SEQUENCE CHARACTERISTICS:
LENGTH: 152 amino acids
TYPE: amino acid
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Matches 85; Conservative
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CITY: Seattle
                                                                                                                                                                                                                                                                                                                                USA
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                                                                                                                                                                                                                                                                                                                                                 98102
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                                                                                                                                                                                                                                                                                                      STATE: WA
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US-08-219-878A-1
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49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                    1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 11, Application US/09142583A
Patent No. 6221842
GENERAL INFORMATION:
APPLICANT: GOLDSPINK, GEOFFREY
TITLE OF INVENTION: METHOD OF TREATING MUSCULAR DISORDERS
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                               77.2%; Score 465; DB 5; Length 153; 98.8%; Pred. No. 7.2e-48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              77.2%; Score 465; DB 4; Length 156; 98.8%; Pred. No. 7.3e-48; tive 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION DATA:

RAPLICATION DATA:

APPLICATION NUMBER: US/09/142,583A
FILING DATE: 29-Oct-1998
CLASSIFICATION: cUnknown>
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATE: 11-MAR-1997
APPLICATION NUMBER: WB 9605124.8
FILING DATE: 11-MAR-1996
ATTORNEY/AGENT INFORMATION:
NAME: SADOFF, B. J.
REGISTRATION NUMBER: 36663
                                                                                                                                                                                                                                                                                                         1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: NIXON & VANDERHYE P.C. STREET: 1100 NORTH GLEBE ROAD CITY: ARLINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: 117-263 TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY: linear

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 11:
US-09-142-583A-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                               109 CAPLKPAKSARSVRAQRHIDMPKTQK 134
                                                                                                                                                                                                                                                                                                                                                                                                                                       61 CAPLKPAKAARSVRAORHTDMPKTOK 86
    REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TJU-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3100
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 156 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEPHONE: 7038164000
TELEFAX: 7038164100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS
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                                                                                                                                                                                                                                                                                                         85; Conservative
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ZIP: 22201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ouery Match
Best Local Similarity (
المحمد 85; Conservat
                                                                                                                                                                     TYPE: AMINO ACID TOPOLOGY: linear
                                                                                                                                                                                                                                                                                     Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 6
US-09-142-583A-11
                                                                                                                                                                                                                    PCT-US93-04329-1
                                                                                                                                                        LENGTH:
                                                                                                                                                                                                                                                                 Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    77.2%; Score 465; DB 1; Length 153; 98.8%; Pred. No. 7.2e-48; tive 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         equence 1, Application PC/TUS9304329
GENERAL INFORMATION:
TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
ADDRESSEE: Woodcock Washburn
ADDRESSEE: Wortz Mackiewicz & Norris
STREET: One Liberty Place - 46th Floor
CITY: Philadelphia
                                                                                                           MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.44 Mb STORAGE COMPUTER: IBM PC compatible COMPRATING SYSTEM: PC-DOS/MS-nnc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.44 MD STORAGE COMPUTER: IBM PS/2
OPERATING SYSTEM: PC-DOS
SOFTWARE: WORDPERFECT 5.0
CURRENT APPLICATION DATA:
: One Liberty Place - 46th Floor
Philadelphia
                                                                                                                                                                                                                                                                                   CLASAPLICATION DATA:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/881,524
FILING DATE: 08-MAY-1992
ATTORNEY/AGENT INFORMATION:
NAME: Mark DeLuca
REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TJU-1240
TELEPHONE: (215) 568-3439
TELEFAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                       SOFTWARE: WORDERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/219,878A
FILING DATE: 30-MAR-1994
CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: PCT/US93/04329
FILING DATE: 19930507
CLASSIFICATION:
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APPLICATION NUMBER: 07/881,524
FILING DATE: 08-MAY-92,
ATTORNEY AGENT INFORMATION:
NAME: MAYK DELUCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 98.8
Matches 85; Conservative
                                                              COUNTRY: USA ZIP: 19103 COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      amino acid
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41:

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INFORMATION FOR SEQ ID NO:
                 SEQUENCE CHARACTERISTICS
                                     LENGTH:
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                                 Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDHRRLEMY 74
           1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    76.1%; Score 458; DB 6; Length 119; larity 97.7%; Pred. No. 3.6e-47; Conservative 1; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 41, Application US/08989251
Patent No. 601731
GENERAL INFORMATION:
APPLICANT: Tekamp-01son, Patricia
TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
TITLE OF INVENTION: PROTEINS IN YEAST
NUMBER OF SEQUENCES: 41
CORRESPONDENCE ADDRESS:
ADDRESSEE: ADDRESSEE: ADDRESSEE: ADDRESSEE: ADDRESSEE: 3605 Glenwood Ave. Suite 310
                                                                                                                                                                                               A5405942-1
;Patent No. 5405942
; APPLICANT: BELL, GRAEME I.;RALL, LESLIE B.;MERRYWEATHER.
                                                                                                                                                                                                                                                                   ; TITLE OF INVENTION: PREPRO INSULIN-LIKE GROWTH FACTORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/989,251
                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES: 16
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/65,673
FILING DATE: 16-JUN-1987
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 630,557
FILING DATE: 19-JUL-1984
                                                                                                           112 CAPLKPAKSARSVRAQRHTDMPKTQK 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              75 CAPLKPAKSARSVRAQRHTDMPKTQK 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98
                                                                                       61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE/DOCKET NUMBER: 5784-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 CAPLKPAKAARSVRAQRHTDMPKTQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Spruill, W. Murray REGISTRATION NUMBER: 32,943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELECOMMUNICATION INFORMATION:
TELEPHONE: 919 420 2202
TELEFAX: 919 881 3175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
tes 84; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Raleigh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ns
                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 119
5405942-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                      Length 191;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Tekamp-Olson, Patricia
APPLICANT: Tekamp-Olson, Patricia
TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
TITLE OF INVENTION: PROTEINS IN YEAST
NUMBER OF SEQUENCES: 41
CORRESPONDENCE ADDRESS:
ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP
STREET: 3605 Glenwood Ave. Suite 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OPERATING SYSTEM: PCT-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/340,250
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION:
                                                                                                                      DB 3;
                                                                                                                    75.5%; Score 454.5; DB 3; 97.7%; Pred. No. 1.7e-46; iive 1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 454.5; DB 3
Pred. No. 1.7e-46;
1; Mismatches 0
                                                                                                                                                                                                                                                                                                    61 CAPLKPAKAA-RSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 CAPLKPAKAA-RSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 41, Application US/09340250
Patent No. 6083723
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            08/989,251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         32,943
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TELEPHONE: 919 420 2202
TELEFAX: 919 881 3175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    75.5%;
97.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Spruill, W. Murray
REGISTRATION NUMBER: 32,
REFERENCE/DOCKET NUMBER:
: 191 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 191 amino acid
TYPE: amino acid
                                                                                                                                       Best Local Similarity 97.7
Matches 85; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: 919 881 3175 INFORMATION FOR SEQ ID NO:
                                                        ; MOLECULE TYPE: protein US-08-989-251-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; MOLECULE TYPE: protein US-09-340-250-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: US
ZIP: 27622
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
FILING DATE:
                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 85; Conserv
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                                   TOPOLOGY:
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                                                                                                                                                                                                                                                                                                                                                                                                      US-09-340-250-41
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STATE:
                                                                                                                      Query Match
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ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
STREET: Suite 4700
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Best Local Similarity 96.15
Marches 74; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   62 LRPARSARSVRAQRHTD 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            64 LKPAKAARSVRAQRHTD 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            78 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 78 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                . single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; MOLECULE TYPE: peptide US-08-460-890A-47
                                                                Los Angeles
California
                                                                           STATE: California COUNTRY: U.S.A. ZIP: 90071-2066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Los Angeles
STATE: California
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    ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-167-641C-47
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                75.5%; Score 454.5; DB 4; Length 191; 97.7%; Pred. No. 1.7e-46; tive 1; Mismatches 0; Indels 1;
                                                                                                                                                                          APPLICANT: Tekamp-Olson, Patricia
TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
TITLE OF INVENTION: PROTEINS IN YEAST
NUMBER OF SEQUENCES: 41
CORRESPONDENCE ADDRESS:
ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP
STREET: 3605 Glenwood Ave. Suite 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 47, Application US/08460890A

Patent No. 5994109

CENERAL INFORMATION:

APPLICANT: Woo', Savio L.C.

APPLICANT: Cristiano, Richard J.

APPLICANT: Cristiano, Richard J.

APPLICANT: Gritchalk, Stephen

TITLE OF INVENTION: MUCLEIC ACID TRANSPORTER SYSTEMS AND TITLE OF INVENTION: METHODS OF USE

NUMBER OF SEQUENCES: 65

CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                       COUNTRY: US
ZIP: 27622
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/528,108
146 CAPLKPAKSAKRSVRAQRHTDMPKTQK 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   32,943
32,943
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                                                                                                                    Sequence 41, Application US/09528108
Patent No. 6312923
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/989, 251
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: SPITILI, W. MULTAY
REGISTRATION NUMBER: 32,943
REFERENCE/DOCKET NUMBER: 5784
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919 420 2202
TELEFAX: 919 881 3175
INFORMATION FOR SEQ ID NO: 41:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             : 191 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE: protein 19-528-108-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Jery Match
Best Local Similarity
Matches 85; Conserva
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                                                                                                                                                                                                                                                                                                                      Raleigh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE
                                                                                                                                                                                                                                                                                                                      CITY: Rale
STATE: NC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-460-890A-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                               US-09-528-108-41
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Sequence 47, Application US/08167641C

Patent No. 6033884

GENERAL INFORMATION:
APPLICANT: Woo, Savio L.C.
APPLICANT: Smith, Louis C.
APPLICANT: Cristiano, Richard J.
APPLICANT: Cristiano, Richard J.
APPLICANT: Gottchark, Stephen
TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS AND
TITLE OF INVENTION: METHODS OF USE
NUMBER OF SEQUENCES: 65
CORRESPONDENCES: 65
CORRESPONDENCE AUDRESS:
ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
STREET: Suite 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              67.9%; Score 409; DB 2; Length 78; 96.1%; Pred. No. 1.5e-41; tive 3; Mismatches 0; Indels
                                                                                                                                                                                           CARENT APPLICATION DATE:

CARENT FELLING DATE:

CLASSIFICATION: 435

FILING DATE:

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/167,641

FILING DATE: December 14, 1993

APPLICATION NUMBER: 07/855,389

FILING DATE: March 20, 1992

APPLICATION NUMBER: 07/855,389

FILING DATE: March 19, 1993

APPLICATION NUMBER: 07/8593/02725

FILING DATE: March 19, 1993

APTORNEY AGENT INFORMATION:

NAME: Warburg, Richard J.

REGISTRATION NUMBER: 32,327

REFERENCE/DOCKET NUMBER: 212/066

TELECOMMUNICATION INFORMATION:

TELEPHONE: (213) 489-1600

TELEPHONE: (213) 489-1600

TELEFEX: 67-3510

INFORMATION FOR SEQ ID NO: 47:
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: Storage
                                                                                      COMPUTER: IBM Compatible OPERATING SYSTEM: IBM P.C. DOS 5.0 SOFTWARE: FSSTSEQ for Windows 2.0 CURRENT APPLICATION DATA:
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08/167,641
APPLICATION NUMBER: US/08, FILING DATE: June 5, 1995 CLASSIFICATION: ,435 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 96.1<sup>st</sup>
Matches 74; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    64 LKPAKAARSVRAQRHTD 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; TOPOLOGY: linear; MOLECULE TYPE: peptide US-08-460-971A-47
                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 14
US-08-462-040-47
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 TLGGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAP 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 409; DB 3; Length 78;
Pred. No. 1.5e-41;
3; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 71. Application US/08460971A
Fatent No. 6150168
GENERAL INFORMATION:
APPLICANT: Woo, Savio L.C.
APPLICANT: Smith, Louis C.
APPLICANT: Cristiano, Richard J.
APPLICANT: Gritchalk, Stephen
TITLE OF INVENTION: MCLEIC ACID TRANSPORTER SYSTEMS AND TITLE OF INVENTION: METHODS OF USE
NUMBER OF SEQUENCES: 65
CORRESPONDENCE ADDRESS:
  COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: Storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: FastSEQ for Windows 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/167,641C
FILING DATE: December 14, 1993
CLASSIFICATION NUMBER: 07/0855,389
FILING DATE: March 10, 1993
APPLICATION NUMBER: 07/0859/02725
FILING DATE: March 19, 1993
APPLICATION NUMBER: 205/012
REGISTRATION NUMBER: 205/012
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 205/012
TELEPHONE: (213) 489-1600
TELEPHONE: (213) 489-1600
TELEPHONE: (213) 489-1600
TELERA: 67-5510
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
LENGTH: 78 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: FASTSEQ for Windows 2.0
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
STREET: Suite 4700
CITY: Los Angeles
STATE: Calliornia
COUNTRY: U.S.A.
2IP: 90071-2066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                67.9%;
96.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 67.99
Best Local Similarity 96.19
Matches 74; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: linear
MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-167-641C-47
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US-08-460-971A-47
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4 TLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAP 63
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JOS-108-402-40.44

Patent No. 6177554

GENERAL INFORMATION:

APPLICANT: Smith, Louis C.

APPLICANT: Smith, Louis C.

APPLICANT: Gristiano, Richard J.

APPLICANT: Los ADBLESS:

ADBRESSEE: Lyon & Lyon

STREET: Suite 4700

GITY: Los Angeles

STREET: Galifornia

COUNTRY: U.S.A.

ZIP: 90071-2066

COMPUTER: BADBALE FORM:

MEDIUM TYPE: 3.5 Diskette, 1.44 Mb

MEDIUM TYPE: 3.5 Diskette, 1.44 Mb

MEDIUM TYPE: 3.5 Diskette, 1.44 Mb

OPPRATING SYSTEM: IBM Compatible

COMPUTER: BADBALE FORM:

MEDIUM TYPE: 3.5 Diskette, 1.44 Mb

SOFTWARE: FastSEQ for Windows 2.0

CURRENT APPLICATION NUMBER: US/08/462,040

FILING DATE: June 5, 1995

CLASSIFICATION NUMBER: US/08/462,040

FILING DATE: December 14, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       67.9%; Score 409; DB 4; Length 78; 96.1%; Pred. No. 1.5e-41; tive 3; Mismatches 0; Indels
FILING DATE: December 14, 1991
APPLICATION NUMBER: 07/855,389
FILING DATE: March 20, 1992
APPLICATION NUMBER: PCT/US93/02725
FILING DATE: March 19, 1993
ATTORNEY/AGENT INFORMATION:
NAME: WATDURY/AGENT INFORMATION:
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 32,327
FELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCES: 12.02
CORRESPONDENCES: 12.02
CORRESPONDENCES: 12.02
CORRESPONDENCE ADDRESS:
ADDRESSE: Burns, Doane, Swecker & Mathis
STREET: George Mason Bldg., Washington & Prince Sts.
CITY: Alexandria
STATE: Virginia
COUNTRY: United States
ZIP: 22313-1404
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION NATA:
APPLICATION NUMBER: US/07/953,230A
                                                                                                                                                                                                                                                                                                                                                                                                        Length 78;
                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: CHEN, Thomas T
APPLICANT: SHAMBLOTT, Michael J
TITLE OF INVENTION: INSULIN-LIKE GROWTH FACTORS ISOLATED
TITLE OF INVENTION: FROM RAINBOW TROUT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            028755-010
                                                                                          NAME: Marburg, Richard J.
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET WINBER: 212/078
TELECOMMUNICATION INFORMATION:
TELECHONE: (213) 489-1600
TELERA: (213) 955-0440
TELERA: (7-3510
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
LENTH: 78 aming acids
APPLICATION NUMBER: 07/855,389
FILLING DATE: March 20, 1992
APPLICATION NUMBER: PCT/US93/02725
FILLING DATE: March 19, 1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 9, Application US/07953230A Patent No. 5476779 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: CRENE-FRUTY, Sharon E
REGISTRATION NUMBER: 36,113
REFERENCE/DOCKET NUMBER: 02875
TELEPHONE: (703) 836-2021
INFORMATION FOR SEQ ID NO: 9:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 176 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 96.19
Matches 74; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               64 LKPAKAARSVRAQRHTD 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                        TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear
MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 15
US-07-953-230A-9
                                                                                                                                                                                                                                                                                                                                                                 08-462-040-47
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GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd.

OM protein - protein search, using sw model

October 25, 2002, 15:52:51; Search time 6.68675 Seconds (without alignments) 642.745 Million cell updates/sec Run on:

Title: Perfect score: Sequence:

US-09-852-261-6 602 1 GPETLCGAELVDALQFVCGD.....TNKKMKSQRRRKGSTFEEHK 111

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

ched:

105224 Total number of hits satisfying chosen parameters: 105224 seqs, 38719550 residues

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% .

Maximum Match 100%
Listing first 45 summaries

SwissProt_40:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	scriptio	Q95222 oryctolagus	P05018 mus musculu	homo	rattu	P17647 cavia porce	homo s	canis			capra		P05017 mus musculu	P08025 rattus norv	coturni	P18254 gallus gall	snouns	P16501 xenopus lae	_	P17085 oncorhynchu	P51458 equus cabal	_	Q90325 cyprinus ca	Q02816 oncorhynchu	P10764 ovis aries	P07456 bos taurus	P01344 homo sapien	Q08279 cavia porce	mustel		ednns	P23695 sus scrofa	. P09535 mus musculu	P01346 rattus norv
SUMMARIES	QI QI	IGF1_RABIT	IGFB_MOUSE	IGFB_HUMAN	IGFB_RAT	IGF1_CAVPO	IGFA_HUMAN	IGF1_CANFA	IGF1_PIG	IGF1_BOVIN	IGF1_CAPHI	IGF1_SHEEP	IGFA_MOUSE	IGFA_RAT	IGF1_COTJA	IGF1_CHICK	IGF1_SUNMU	IGF1_XENLA	IGFB_CYPCA	IGF1_ONCKI	IGF1_HORSE	IGF1_ONCMY	IGFA_CYPCA	IGF2_ONCMY	IGF2_SHEEP	IGF2_BOVIN	IGF2_HUMAN	IGF2_CAVPO	IGF2_MUSVI	IGF_MYXGL	IGF2_HORSE	IGF2_PIG	IGF2_MOUSE	IGF2_RAT
	Length DB	3 .		2	181 1	0	53	22	m	54	54			153 1																		181	0	0
ď	Query Match L		σ	0.68	84.4	77.2	77.2	76.4	76.4	76.4	75.7		74.8	74.3	9.69	9.69	69.3	68.5	6.99	8.99	66.4	66.1	65.3	45.2	40.2	39.5	38.5	38.4	38.1	œ	38.0	38.0	37.7	37.3
	Score	602	539	536	508	465	465	460	460	460	456	452	450	447	419	419	417	412.5	403	402	400	398	393	272	242	236	232		229.5	229	229	229	227	224.5
	Result No.	П	7	М	4	5	9	7	ω	6	10	11	12	13	14	15	16	17	18	19	20	21	22 ·	23	24	25	26	27	28	29	30	31	32	33

P33717 gallus gall P07453 myoxocephal	P01336 gadus calla P01337 batrachoidi	P01338 batrachoidi	P09536 nyarolagus P01327 chinchilla	P12708 zaocys dhum P12703 alliqator m	P01339 thunnus thy	P07454 anser anser	P01334 crotalus at
1 IGF2_CHICK 1 INS_MYOSC	1 INS_GADCA 1 INS1_BATSP	1 INS2_BATSP	1 INS_HYDCU 1 INS_CHIBR	1 INS_ZAODH 1 INS_ALLMI	1 INSZ_THUTH	1 INS_ANSAN	1 INS_CROAT
50 1	51	200	51	51	51	51	51
36.4	26.3 25.8	25.6	25.1 24.8	24.8 24.6	24.3	24.3	24.3
219 159.5	158.5 155.5	154	151 149	149 148	146.5	146	146
34 35	36 37	38	2. 4 0.0	41	43	44	45

ALIGNMENTS

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D.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
YQPPSTNKKMKSQRRRKGSTFEEHK -> EVHLKNTSRGSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -!- SUBCELLULAR LOCATION: Serreted.
-!- ALTERNATIVE PRODUCTS: 2 ISOFORMS; ISOFORM IGF-IA (AC P05017) AND ISOFORM IGF-IB (SHOWN HERE); ARE PRODUCED BY ALTERNATIVE SPLICING.
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                       Gaps
                                                                                                                                               09
                                                                                                                                                          13 GPETLCGAELVDALQEVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bell G.I., Stempten M.M., Fong N.M., Rall L.B.;
"Sequences of liver cDNAs encoding two different mouse insulin-like growth factor I precursors.";
Nucleic Acids Res. 14:7812,7822(1986).
-i- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA, ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
                                                                                                                                              1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
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13-AUG-1987 (Rel. 05, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin).
IGF1 OR IGF-1.
                                                                                                                                                                                                         61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRRKGSTFEEHK 111
                                                                                                Length 143;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INSULIN-LIKE GROWTH FACTOR IB
                                                           GNKNYRM (IN ISOFORM IGF-IA).
819AF577800A1B1A CRC64;
                                                                                                                       Indels
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                                                                                              100.0%; Score 602; DB 1; 100.0%; Pred. No. 2.8e-56;
                                                                                                                                                                                                                                                                               133 AA.
                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; X04482; CAA28170.1; -.
PIR; B25540; B25540.
HSSP; P05019; IGF1.
MGD; MGI-96432; Igf1.
InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ProDom; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IlGF; 1.
                                                                                                                                                                                                                                                                               PRT;
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                                                                        143 AA; 16091 MW;
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                                                                                                                       Matches 111; Conservative
                                                                                                                                                                                                                                                                               STANDARD;
 102
80
93
84
143
                                                                                                                                                                                                                                                                                                                                                             musculus (Mouse).
                                                                                                          Local Similarity
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SEQUENCE FROM N.A.
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 95
38
50
79
119
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                                                                                                                                                                                                                                                                             IGFB_MOUSE
P05018;
DOMAIN
DISULFID
DISULFID
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  de Pagter-Holthuizen P., van Schaik F.M.A., Verduijn G.M., van Ommen G.J.B., Bouma B.N., Jansen M., Sussenbach J.S.; "Organization of the human genes for insulin-like growth factors I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-78130171; PubMed-632300;
Rinderknecht E., Humbel R.E.;
The aminon acid sequence of human insulin-like growth factor I and
its structural homology with proinsulin.";
J. Biol. Chem. 253:2769-2776(1978).
                                                                                                                                                                                                                                                                                 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene. Alternative RNA processing produces two insulin-like growth factor I precursor peptides.";
J. Biol. Chem. 261:4828-4832(1986).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota...
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13-AUG-1987 (Rel. 05, Created)
13-AUG-1987 (Rel. 05, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin C).
IGF1 OR IBP1.
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                                                                                                                                                                                                                                                                                                                                                                                        61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRKKGSTFEEHK 111
                                                                                                                                                                                               Length 133;
                                                                                                                                                                                                                                         Indels
C.
D.
D.
E PEPTIDE.,
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
W. B8ESCO5B8BD62502 CRC64;
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                                                                                                                                                                                             Score 539; DB 1;
Pred. No. 1e-49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Proc. Natl. Acad. Sci. U.S.A. 83:77-81(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 195 AA
                                                                                                                                                                                                                                         1; Mismatches
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MEDLINE-86168194; Pubmed-2937782;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
MEDLINE-86094355; PubMed-3455760;
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                                                                                                                                                   14915 MW;
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                                                                                                                                                                                             89.5%;
91.0%;
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                                                                                                                                                                                                                                         Conservative.
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    63
84
92
133
70
83
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    52
64
85
93
128
40
69
133 AA;
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                                                                                                         DISULFID
                                                                                        DISULFID
                                                                                                                                                   SEQUENCE
                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                     Local
                      DOMAIN
DOMAIN
PROPEP
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Best Local Similarity 96.1
Matches 98; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rattus norvegicus (Rat)
                                        195 AA;
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STRAND
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IGFB_RAT
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                                                                                                                                                                                                                              Sato A., Nishimura S., Ohkubo T., Kyogoku Y., Koyama S., Kobayashi M., Yasuda T., Kobayashi Y.;
"IH-NMA assignment and secondary structure of human insulin-like growth factor-I (IGF-I) in solution.";
J. Blochem. 111:529-536(1992).
                                                                                       Cooke R.M., Harvey T.S., Campbell I.D.; "Solution structure of human insulin-like growth factor 1: a nuclear magnetic resonance and restrained molecular dynamics study."; Blothemistry 30:5484-5491(1991).
3D-STRUCTURE MODELING.
MEDLINE-83210259; PubMed=6189745;
Blundell T.L., Bedarkar S., Humbel R.E.;
Tartiary structures, receptor binding, and antigenicity of insuliniake growth factors.";
Fed. Proc. 42:2592-2597(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS00262: INSULIN; 1.
Insulin family; Growth factor; 3D-structure; Plasma;
Alternative splicing; Signal.
SIGNAL 21 21 POTENTIAL.
PROPEP 22 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRINTS; PR00276; INSULINA.
PRNINTS; PR00277; INSULINB.
PRODOM; PD001040; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR000739; Insulin_IGF_relaxin
Pfam; PF00049; Insulin; 1.
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AAA52537.1; JOINED.
AAA52537.1; JOINED.
AAA52539.1; -
                                                                                                                                        STRUCTURE BY NMR. MEDLINE=92316903; PubMed=1319992;
                                                                               MEDLINE=91242464; PubMed=2036417;
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CAA27153.1;
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IGHU1B.
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A26181.
S30540.
                                                                     STRUCTURE BY NMR.
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M11568; A
X03563; C
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X03421;
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MIM; 147440;
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PDB;
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49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A. MEDLINE-89127259; PubMed=3221878; Roberts C.T., Lasky S.R., Lowe W.L., Seaman W.T., Leroith D.; Structure of the rat insulin-like growth factor II transcriptional unit: heterogeneous transcripts are generated from two promoters by use of multiple polyadenylation sites and differential ribonucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Shimatsu A., Rotwein P.; "Mosaic evolution of the insulin-like growth factors. Organization, agequence, and expression of the rat insulin-like growth factor I gene.";
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01-FBB-1991 (Rel. 17, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Insulin-11ke growth factor IB precursor (IGF-IB) (Somatomedin).
IGF1 OR IGF-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              89.0%; Score 536; DB 1; Length 195; 96.1%; Pred. No. 3.2e-49; ive 2; Mismatches 2; Indels
INSULIN-LIKE GROWTH FACTOR IB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        109
21841 MW; E88A8CFBD1CD1873 CRC64;
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SEQUENCE FROM N.A.
MEDLINE-87222423; PubMed=3034909;
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                               EDYCE
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130 AA

STANDARD;

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                                                                                                                                                                                                                                                                                                            Bell G.I., Stempien M.M., Fong N.M., Scino S.;
"Sequence of a cDNA encoding guinea pig IGF-I.";
Nucleic Acids Res. 18:4275-4275(1990).
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
                                                                                                                                          Cavia porcellus (Guinea pig).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Hystricognathi; Cavidae; Cavia.
                                                                                                      Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
                                                                                                                                                                                                                                                                                                                                                                                                                                    -!- SUBCELLULAR LOCATION: Secreted.
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                        01-AUG-1990 (Rel. 15, Created)
01-AUG-1990 (Rel. 15, Last sequence update)
01-FEB-1994 (Rel. 28, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Signal
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HSSP; P05019; 1GF1.
Interpro; IPR000739; Insulin_IGF_relaxin.
Pfan; PP00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINA.
PRINTS; PR000777; INSULINB.
PRINTS; PR000777; INSULINB.
                                                                                                                                                                                                                                                                      TISSUE=Pancreas;
MEDLINE=90332447; PubMed=2377480;
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                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                          NCBI_TaxID=10141;
    IGF1 CAVPO
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                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to licenseelab-sib.ch).
                                                                                                                                                                                                                                               MUCH HIGHER GROWTH-PROMOTING ACTIVITY.

-1- SUBCELLULAR LOCATION: Secreted.
-1- ALTERNATIVE PRODUCTS: 2 ISOFORMS; ISOFORM IGF-IA (AC P08025) AND ISOFORM IGF-IB (SHOWN HERE); ARE PRODUCED BY ALTERNATIVE SPLICING.
-1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
                                                                                                                                                                                                          PLASMA,
                                                                                                                                                                                                                                  HAVE A
                                                                                                                       Nakamura S., Niwa M., Zapf J.;
"Primary structure of rat insulin-like growth factor-I and its
                                                                                                                                                           biological activities.",
J. Biol. Chem. 264:5616-5621(1989).
-!- FUNCTION: THE INSULIN'-LIKE GROWTH FACTORS, ISOLATED FROM
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT
                                                                          MEDLINE-89174609; Pubmed-2538424;
Tamura K., Kobayashi M., Ishii Y., Tamura T., Hashimoto K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 508; DB 1; Length 181; Pred. No. 2.5e-46;
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BY SIMILARITY.
SY SIMILARITY.
APL -> VRC (IN REF. 2).
52BAB431875A1A06 CRC64;
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Pfam; PF00049; Insulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ProDom; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IlGF; 1.
id splicing.";
1. Endocrinol. 2:1115-1126(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; M15650; AAA41214.1; -.
EMBL; M15647; AAA41214.1; JOINED.
EMBL; M15648; AAA41214.1; JOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; M15649; AAA41214.1; JOINED.
EMBL; X06107; CAA29480.1; ALT_SEQ.
EMBL; M15480; AAA41385.1; ALT_SEQ.
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88.7%;
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96
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PIR; A26859; A26859.
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Gaps
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Pred. No. 5.6e-42;
1; Mismatches 0; Indels
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Matches 85; Conservative
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49 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 108

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61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRRKGST 106

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INSULIN-LIKE GROWTH FACTOR I.

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Sandberg Nordqvist A.C., Stahlbom P.A., Lake M., Sara V.R.;
"Characterization of two cDNAs encoding insulin-like growth factor 1
                                                                                                                                                                                                                                  Rotwein P., Pollock K.M., Didder D.K., Krivi G.G.;
"Organization and sequence of the human insulin-like growth factor gene. Alternative RNA processing produces two insulin-like growth factor I precursor peptides.";
J. Biol. Chem. 261:4828-4832(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIINE-86108862; PubMed-3002851; Be Patter-Holthing P., van Schailk F.M.A., Verduijn G.M., van Ommen G.J.B., Bouna B.N., Jansen M., Sussenbach J.S.; "Organization of the human genes for insulin-like growth factors I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=70130171; PubMed=632300;
Rinderknecht E., Humbel R.E.;
"The amino acid sequence of human insulin-like growth factor I and
                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-84068210; PubMed-6358902;
Jansen M., van Schaik F.M.A., Ricker A.T., Bullock B., Woods D.E.,
Gabbay K.H., Nussbaum A.L., Sussenbach J.S., van den Brande J.L.;
"Sequence of cDNA encoding human insulin-like growth factor I
precursor.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     le Bouc Y., Dreyer D., Jaeger F., Binoux M., Sondermeyer P., "Complete characterization of the human IGF-I nucleotide sequence isolated from a newly constructed adult liver cDNA library."; FEBS Lett. 196:108-112(1986).
13-AUG-1987 (Rel. 05, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
Insulin-like growth factor IA precursor (IGF-IA) (Somatomedin C).
                                                                                                            Craniata; Vertebrata; Euteleostomi;
Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-84295593; PubMed-6382022;
Dull T.J., Gray A., Hayflick J.S., Ullrich A.;
"Insulin-like growth factor II precursor gene organization in relation to insulin gene family.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Steenbergh P.H., Koonen-Reemst A.M.C.B., Cleutjens C.B.J.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             lochem. Biophys. Res. Commun. 175:507-514(1991).
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                                                                                                                                                                                           SEQUENCE FROM N.A. MEDLINE-86168194; PubMed-2937782;
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MEDLINE-91207342; PubMed=2018498;
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MEDLINE-83210259; PubMed=6189745;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE-86108910; PubMed-2935423;
                                                             IGFI OR IBPI.
Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FBS Lett. 195:179-184(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nature 306:609-611(1983).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sato A., Nishimura S., Ohkubo T., Kyogoku Y., Koyama S., Kobayashi M., Yasuda T., Kobayashi Y.; Yasuda T., Kobayashi Y.; "IH-NMR assignment and secondary structure of human insulin-like growth factor-I (IGF-I) in solution."; J. Biochem. 111:529-536(1992).
                                                                                                                                                                                                       nuclear
                                                                                                                     STRUCTURE BY NMR.
MEDLINE-91242464; PubMed-2036417;
COOKE R.M., Harvey T.S., Campbell I.D.;
"Solution structure of human insulin like growth factor 1: a n magnetic resonance and restrained molecular dynamics study.";
Blochemistry 30:5484-5491(1991).
                          of
Blundell T.L., Bedarkar S., Humbel R.E.;
"Tertiary structures, receptor binding, and antigenicity
insulnilie growth factors.";
Fed. Proc. 42:2592-2597(1983).
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Insulin family; Growth factor; Plasma; 3D-structure; Alternative splicing; Signal.
Alternative all 21
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Pfam; PF00049; Insulin; 1.
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SMART; SM00078; IlGF; 1.
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MEDLINE=92316903; PubMed=1319992;
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3GF1; 15-APR-93
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EMBL; L08254; -; NOT_
PIR; PN0622; PN0622.
HSSP; P05019; 1GF1.
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DISULFID
SEQUENCE
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P16545;
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                                                                                                                                                                                                                                                                                                  49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                       Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HAVE A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Euteleostomi;
Canis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (1)
SEQUENCE FROM N.A.
MEDLINE=93366192; PubMed=8359700;
Delafontaine P., Lou H., Harrison D.G., Bernstein K.E.;
Sequence of a cDNA encoding dog insulin-like growth factor I.";
Gene 130:305-306(1993).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               190.200. THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM THE ETWOTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM MICH HIGHER GROWTH-PROMOTING ACTIVITY.

1. SUBCELLULAR LOCATION: Secreted.

1. SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                            01-FEB-1994 (Rel. 28, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
         INSULIN-LIKE GROWTH FACTOR IA.
                                                                                                                                                                                                                                                  Score 465; DB 1; Length 153;
Pred. No. 6.7e-42;
1; Mismatches 0; Indels
                                                                                                                                                                                                                                17026 MW; C6ECD92DCA9B37BC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Canis familiaris (Dog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae;
                                                                                                                                                                                                                                                                                                                                                                                              122 AA
                                                        PEPTIDE
                                                                                                                                                                                                                                                                                                                                       109 CAPLKPAKSARSVRAQRHTDMPKTQK 134
                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                             61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                   77.2%;
98.8%;
                                                                                                                                                                                                                                                                      85; Conservative
                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
 48
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89
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110
110
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88
                                                                                                                                                                                                                                153 AA;
                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 85; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=9615;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     (Fragment).
IGF1 OR IGFIA.
                                                                                                                                                                                                                                                                                                                                                                                            IGF1_CANFA
P33712;
                                                                                                                                                                                                                     TURN
SEQUENCE
                                                                DISULFID
                                                                                    DISULFID
                 DOMAIN
DOMAIN
DOMAIN
DOMAIN
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Weller P.A., Dickson M.C., Huskisson N.S., Dauncey M.J., Buttery P.J.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 20-153 FROM N.A.
MEDLINE=89096956; PubMed=3211153;
Tavakkol A., Simmen R.A., Simmen R.C.M.;
"Porcine insulin-like growth factor-I (pIGF-I): complementary
deoxyribonucleic acid cloning and uterine expression of messenger
ribonucleic acid encoding evolutionarily conserved IGF-I peptides.";
Mol. Endocrinol. 2:674-681(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "The porcine insulin-like growth factor-I gene: characterization and expression of alternate transcription sites.";
J. Mol. Endocrinol. 11:201-211(1993).
-:- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chordata, Craniata, Vertebrata, Euteleostomi,
Cetartiodactyla, Suina, Suidae, Sus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE ......
MEDLINE 90221822; PubMed=2326109;
Medller M., Brem G.;
"Nucleotide sequence of porcine insulin-like growth factor. 1:5'
"Nucleotide sequence of porcine insulin-like growth factor. 1:5'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-AUG-1990 (Rel. 15, Created)
01-AUG-1990 (Rel. 15, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 122;
                                                                                                                                                                                                                                         INSULIN-LIKE GROWTH FACTOR I.
                                                                                                                                                                                                                                                                         A.

D.
E. PEPTIDE.

O7
BY SIMILARITY:

O8
BY SIMILARITY:

O86004DC44E7D75 CRC64;

A60; DB 1; Length

1.8e-41;

1.
                                                                                                                                                          insulin family; Growth factor; Plasma; Signal.
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                                                                                                                                                                                                                SIMILARITY
                                                                           ProDom; PD001048; Insulin_IGF_relaxin; 1. SMART; SM00078; IlGF; 1.
                        InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
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STRAIN=WHITE LANDRACE; TISSUE=Liver;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=94128209; PubMed=8297476;
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Mammalla; Eutheria; Cetartioda
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13407 MW;
                                                                                                                            PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             76.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   llarity 97.7%;
Conservative
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P05019; 1GF1
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nes 84; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=9823;
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                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions and a sits content is in no way modified and this statement is not removed. Usage by and for commercial
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                                                                                                                                                                                                                                                             entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
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Sukaryota, Metazoca; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos
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01-NOV-1991 (Rel. 20, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INSULIN-LIKE GROWTH FACTOR I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 460; DB 1; Length -- Pred. No. 2.26-41; Indels
                                                                          SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIMILARITY. 6098792DCDA0CD7D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MICHEPPO, 1701.

PIGER POURTY, PROMOTY, INSULIN_IGF_relaxin.

PRINTS, PRO0275; INSULINA.

PRINTS, PRO0277; INSULINA.

PRODOM; PD001048; INSULINA.

PROSITE; PS00262; INSULINA.

INSULIN INSULINA.

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INSULINA.
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                                                                                                                                                                                                                                                                                                                                       EMBL; X17492; CAA35527.1; -.
EMBL; X55288; CAA3617.1; -.
EMBL; X52077; CAA36296.1; -.
EMBL; M31175; AAA31043.1; ALT_INIT.
                                                       SUBCELLULAR LOCATION: Secreted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17010 MW;
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ilarity 97.7%;
Conservative
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Best Local Similarity
Matches 84; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PLASMA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE-88268820; PubMed-3390164;
Francis G.L., Opton F.M., Ballard F.J., McNeil K.A., Wallace J.C.;
"Insulin like growth factors 1 and 2 in bovine colostrum. Sequences
and biological activities compared with those of a potent truncated
                                                                                                                                                       Schmidt A., Einspanier R., Amselgruber W., Sinowatz F., Schams D., "Expression of insulin-like growth factor 1 (IGF-1) in the bovine oviduct during the oestrous cycle."; Exp. Clin. Endocrinol. 102:364-369(1994).
                                                                                                                                                                                                                                                                                                                          MEDLINE-86085881; PubMed-3941093;
Honegger A., Humbel R.E.;
"Insulin-like growth factors I and II in fetal and adult bovine
serum. Purification, primary structures, and immunological
cross-reactivities.";
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"Nucleotide sequence of the bovine insulin-like growth factor (IGF-1) and its IGF-1A precursor."; Nucleic Acids Res. 18:676-676(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Biochem. J. 251:95-103(1988).
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 460; DB 1; Length 154;
Pred. No. 2.2e-41;
1; Mismatches 1; Indels
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SUBCELLULAR LOCATION: Secreted.
SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INSULIN-LIKE GROWTH FACTOR I.
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64201B6AF3140999 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; X15726; CAA33746.1; --
EMBL; S76122; AAD14209.1; --
PIR; A25622; IGBO1.
PIR; S00465; S00465.
PIR; S12672; S12672.
HSSP; P05019; IGF1.
INTERPIO; IPR000739; Insulin_IGF_relaxin.
PFIANTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINA.
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BY SIMILARITY.
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1; Mismatches
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C.
A.
D.
E PEPTIDE.
                                                                                                         SEQUENCE OF 50-119 FROM N.A.
MEDLINE-95172127; PubMed-7867698;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Biol. Chem. 261:569-575(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ΒY
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PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            y Match 76.4%;
Local Similarity 97.7%;
nes 84; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17066
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SEQUENCE OF 50-119
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75.7%;
96.5%;
                                                  Conservative
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                          Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=9940;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE=Liver
                                               83;
                                                                                                                                                                                                                                                    IGF1_SHEEP
P10763;
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                     Query Match
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                                   Local
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IGF1_SHEEP
                                               Matches
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50 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 109
                                                                                                                                                                                                                                                                                                                                                                                   Mikawa S., Yoshikawa G.-I., Yamano Y., Sakai H., Komano T., Hosoi Y., Utsumi K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                       growth factor-I (IGF-I) mRNAS.";
Biosci, Biotechnol. Biochem. 59:759-761(1995).
-1- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
-1- SUBCELLULAR LOCATION: Secreted.
-1- TISSUE SPECIFICITY: EXPRESSED IN ALL TISSUES EXAMINED: BRAIN,
LUNG, LIVER, SPLEER, UTERUS, OVARY, TESTIS, HEART AND SKELETAL
                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea; Bovidae; Caprinae; Capra.
                                                                                                                                                                                                                                                                                                                                                                                                                          "Tissue- and development-specific expression of goat insulin-like
                                                                                                                                                                    01-OCT-1996 (Rel. 34, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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07238B6AF3068422 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'nsulin family; Growth factor; Plasma; Signal.
                                                                                                                                        154 AA.
                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A., AND TISSUE SPECIFICITY.
STRAIN-SHIBA; TISSUE-Liver;
MEDLINE-95290780; PubMed-7772848;
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PRINTS; PR00277; INSULINB.
ProDom; PD001048; Insulin_IGF_relaxin; 1.
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Pfam; PF00049; Insulin; 1.
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E PEPTIDE.
BY SIMILAR:
BY SIMILAR:
BY SIMILAR:
                                             PRT;
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                             61 CAPLKPAKAARSVRAQRHTDMPKTQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PS00262; INSULIN; 1.
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EMBL; D26119; BAA05115.1; --
EMBL; D11378; BAA01976.1; --
HSSP; P05019; 1GF1.
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17082 !
                                                                                                                                        STANDARD;
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PROSITE; PS00262; INSU
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16-OCT-2001
                                                                                                                                        IGF1_CAPHI
P51457;
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PAR REPRESENTATION OF THE PROPERTY AND PROPE

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50 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 109
                                                                                                                               Gaps
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MEDITHS-8932315, PubMed-2752053;
MEDITHS-8932315, PubMed-2752053;
MEDY A.W., Browne C.A., Simpson R.J., Thorburn G.D.;
"Simultaneous isolation of insulin-like growth factors I and II from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Wong E.A., Ohlsen S.M., Godfredson J.A., Dean D.M., Wheaton J.E.; "Cloning of ovine insulin-like growth factor-I cDNAs: heterogeneity in the mRNA population."; DNA 8:649-657(1989).
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Ohlsen S.M., Dean D.M., Wong E.A.;
Characterization of multiple transcription initiation sites of the ovine insulin-like growth factor-I gene and expression profiles of three alternatively spliced transcripts.";
DNA Cell Biol. 12:243-251(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ovis aries (Sheep).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
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                                                                                                                                                                                               1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dickson M.C., Saunders J.C., Gilmour R.S.;
"The ovine insulin-like growth factor-I gene: characterization,
expression and identification of a putative promoter.";
J. Mol. Endocrinol. 6:17-31(1991).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-JUL-1989 (Rel. 11, Created)
01-FEB-1991 (Rel. 17, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
                                                               Length 154;
Score 456; DB 1; Len
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            154 AA
                                                                                            Pred. No. 5.96
1; Mismatches
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                                                                                                                                                                                                                                                                                                                                  61 САРЬКРАКААВЗУЙАОВНТОМРКТОК 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Endocrinology 124:1173-1183(1989).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=91197361; PubMed=2015053;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=89136887; PubMed=2537174;
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50 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 109
                                                                                IGFA_MOUSE
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                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE; PS00262; INSULIN: 1.
Insulin family; Growth factor; Plasma; Signal; Alternative splicing.
     Blochim. Blophys. Acta 997:27-35(1989).

-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA, ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A MUCH HIGHER GROWTH-PROMOTING ACTIVITY.

-!- SUBCELLULAR LOCATION: Secreted.
-!- ALTERNATIVE PRODUCTS: 3 ISOFORMS, A, B (SHOWN HERE) AND C; ARE PRODUCED BY ALTERNATIVE SPLICING.
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INSULIN-LIKE GROWTH FACTOR I.
B.
C.
A.
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E PEPTIDE.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 452; DB 1; Length 15
Pred. No. 1.5e-40;
1; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ISOFORM C).
MISSING (IN ISOFORM A).
A -> V (IN REF. 4).
E226CE6AF653CF3F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                               HSSP; P05019; 1GF1.
InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ProDom; PD001048; Insulin_IGF_relaxin; 1
                                                                                                                                                                                                                                                             CAA49230.1; JOINED.
CAA49230.1; JOINED.
CAA49230.1; JOINED.
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96.5%;
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                                                                                                                                                                                           AAA80533.1;
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X69474; CAA49231.1;
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X69475; CAA49232.1;
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Best Local Similarity 96.5
Matches 83; Conservative
                                                                                                                                                                                                                                AAA31546.1
AAA31547.1
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PIR; A33390; A33390.
PIR; B33390; B33390.
PIR; S07198; S07198.
PIR; S07965; S07955.
HSSP; P05019; IGF1.
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97
110
101
21
adult sheep serum.";
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M31735;
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CONFLICT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      growth factor I precursors.";
Nucleic Acids Res. 14:7873-7882(1986).
-1- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bell G.I., Stempien M.M., Fong N.M., Rall L.B., "Sequences of liver cDNAs encoding two different mouse insulin-like
                                                                                                                                                                                                                                                                                                                                                                             Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -!- SUBCELLULAR LOCATION: Secreted.
-!- ALTERNATIVE PRODUCTS: 2 ISOFORMS; ISOFORM IGF-IA (SHOWN HERE)
AND ISOFORM IGF-IB (AC P05018); ARE PRODUCED BY ALTERNATIVE SPLICING.
                                                                                                                                                                                                                           13-AUG-1987 (Rel. 05, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Insulin-like growth factor IA precursor (IGF-IA) (Somatomedin).
IGF1 OR IGF-1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INSULIN-LIKE GROWTH FACTOR IA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3; Indels
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Mismatches
                                                                                                                                                                         127 AA
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C.
A.
D.
E. PEPTIDE.
BY SIMILARITY.
BY SIMILARITY.
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PIR; A25540; A25540.
HSSP; P05019; LGF1.
MGI: 96432; 1gf1.
InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
ProDom; PD001048; Insulin_IGF_relaxin; 1.
                          PRT;
CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=87040760; PubMed=3774549;
                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14120 MW;
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95.3%;
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                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SMART; SM00078; IlGF; 1
PROSITE; PS00262; INSUL
                                                                                                                                                                                                                                                                                                                                                     Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE-Liver;
                                                                                                                                                                            IGFA_MOUSE
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SEQUENCE
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Hoyt E.C., Lund P.K.;
"Isolation of rat testis cDNAs encoding an insulin-like growth factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE OF 46-153 FROM N.A.
MEDLINE-87246437; PubMed-359538;
Murphy L.J., Bell G.I., Duckworth M.L., Friesen H.G.;
"Identification, characterization, and regulation of a rat
complementary deoxyribonucleic acid which encodes insulin-like growth
                                                                                                                                                                                                                         Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
 09
                       82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
MEDLINE-89127259; PubMed-3221878;
MEDLINE-8127259; PubMed-3221878;
Structure of the rat insulin-like growth factor II transcriptional unit: hetergeneous transcripts are generated from two promoters by use of multiple polyadenylation sites and differential ribonucleic acid splicing."

Mol. Endocrinol. 2:1115-1126(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      biological activities.",
J. Biol. Chem. 264:5616-5621(1989).
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
          23 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                               Shimatsu A., Rotwein P.; "Mosaic evolution of the insulin-like growth factors. Organizatio sequence, and expression of the rat insulin-like growth factor I
                                                                                                                                                               01-FEB-1991 (Rel. 17, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Insulin-11ke growth factor IA precursor (IGF-IA) (Somatomedin).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nakamura S., Niwa M., Zapf J., "Primary structure of rat insulin-like growth factor-I and its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=91103966; PubMed=1368571;
Kato H., Okoshi A., Miura Y., Noguchi T.;
"A new cDNA clone relating to larger molecular species of rat
insulin-like growth factor-I mRNA.";
Agric. Biol. Chem. 54:1599-1601(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ľamura K., Kobayashi M., Ishii Y., Tamura T., Hashimoto K.,
                                                                                                                                      153 AA.
                                                             86
                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                 Biol. Chem. 262:7894-7900(1987).
                                                                                                                                                                                                                                                                                                    MEDLINE=87222423; PubMed=3034909;
                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=Testis;
MEDLINE=88003970; PubMed=3652906;
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                                               61 CAPLKPAKAARSVRAQRHTDMPKTQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Endocrinology 121:684-691(1987).
                                                                                                                                                              01-AUG-1988 (Rel. 08, Created)
                                                                                                                                      STANDARD;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                precursor.
                                                                                                                                      IGFA_RAT
P08025:
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              -:- SUBCELLULAR LOCATION: Secreted.
-:- ATTERNATIVE PRODUCTS: 2 ISOFORMS; ISOFORM IGF-IA (SHOWN HERE) AND ISOFORM IGF-IB (AC P08044); ARE PRODUCED BY ALTERNATIVE SPLICING.
-:- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
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ID IGF1_COTJA

ID IGF1_COTJA

STANDARD; PRT; 124 AA.

DT 01-0CT-1996 (Rel. 34, Created)

DT 01-0CT-1996 (Rel. 34, Last sequence update)

DT 16-0CT-2001 (Rel. 40, Last annotation update)

DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin)

GN IGF1.
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966F3C0FA4EB3DE7 CRC64;
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Pred. No. 5.1e-40;
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E PEPTIDE.
BY SIMILARITY.
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MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
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InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SMART; SM00078; Insulin_IGF_relaxin; 1. SMART; SM00078; I1GF; 1.
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ALT_INIT.
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                                                                                                                                                                                                                                                                                                                   JOINED.
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94.28;
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EMBL; M1735; AAA41386.1; AI
EMBL; M17818; AAA41387.1; AI
PIR; JH0133; JH0133.
PIR; B27849; B27804.
PIR; B27804; B27804.
PIR; A22857; A32857.
HSSP; P05019; IGFI.
                                                                                                                                                                                                                                                                                                115651; AAA41215.1; -
115647; AAA41215.1; J
115648; AAA41215.1; J
115649; AAA41215.1; J
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Matches
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Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
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17267 N
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                                                                                                                                             Rotwein P., Kajimoto Y.;
                                                                   Rotwein P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              118
77
89
                                                                                                                                                                                       [3]
SEQUENCE OF 49-118.
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49
78
111
119
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153 AA;
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Matches 76; Conserv
                                           SEQUENCE FROM N.A.
                      NCBI_TaxID=9031;
                                                                   Kajimoto Y.,
                                                                                       precursor.
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                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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Coturnix coturnix japonica (Japanese quail).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                             the oviduct of
                                                                                   Kida S., Iwaki M., Nakamura A., Miura Y., Takenaka A., Takahashi S., Noguchi T.;
"Insulin-like growth factor-I messenger RNA content in the oviduct of Japanese quail (Coturnix coturnix japonica): changes during growth and development or after estrogen administration.";
comp. Biochem. Physiol. 109C:191-204(1594).
-i-FUNCTION: THE INSULIN-LIKE GROWTH FACTORS.
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20 GPETLCGAELVDALQEVCGDRGFYFSKPTGYGSSSRRLHHKGIVDECCFQSCDLRRLEMY 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
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01-NOV-1990 (Rel. 16, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                                     INSULIN-LIKE GROWTH FACTOR I.
                                                                                                                                                                                    SUBCELLULAR LOCATION: Secreted. SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 419; DB 1; Length 12.
Pred. No. 3.5e-37;
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                                                                                                                                                                            MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
                                                                                                                                                                                                                                                                                                                             InterPro; IPR000739; Insulin_IGF_relaxin. Pfam; PF00049; Insulin; 1.
                                                                                                                                                                                                                                                                                                                                                   ProDom; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IlGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                          POTENTIAL.
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Insulin family; Growth factor; Plasma.
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                                                                                                                                                                                                                                                                                                          EMBL; S75247; -; NOT_ANNOTATED_CDS
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                                                              SEQUENCE FROM N.A. MEDLINE=95187621; PubMed=7881819;
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88.4%;
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nes 76; Conserv
                                           NCBI_TaxID=93934;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gen. Comp. Endocrinol. 79:459-468(1990).
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
                                                                                                                                                                                                                                                                                    "Structure of the chicken insulin-like growth factor I gene reveals conserved promoter elements.";
J. Biol. Chem. 266:9724-9731(1991).
                                                              Structure and expression of a chicken insulin-like growth factor I
                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=91106695; PubMed=2272467; Ballard F.J., Johnson R.J., Owens P.C., Francis G.L., Upton F.M., Medurtry J.P., Wallace J.C.; C.; Ambler insulin-like growth factor-I: amino acid sequence, radioimmunoassay, and plasma levels between strains and during
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Pred. No. 4.4e-37;
4; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUBCELLULAR LOCATION: Secreted.
SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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Insulin family; Growth factor; Plasma; Signal
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EMBL; M74176; AAA48829.1; -.
PIR; A41399; A41399.
HSSP 105019; 1GF1.
InterPro; IPR000739; Insulin_IGF_relaxin.
Pf00049; Insulin; 1.
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SMART; SM00078; IlGF; 1.
                                                                                                                             Endocrinol. 3:1907-1913(1989).
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SEQUENCE OF 1-21 FROM N.A.
MEDLINE=91236750; PubMed=2033062;
MEDLINE=90190648; PubMed=2628728;
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564.5 465 465 462 460 447

419 404 404 403 402 402 402 398 398

Score

Result

Title: Perfect score:

Run on:

Sequence:

Scoring table:

Minimum DB Maximum DB

Database :

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Chew S.L., Lavender P., Clark A.J., Ross R.J.;

"An alternatively spliced human insulin-like growth factor-I
"I transcript with hepatic tissue expression that diverts away from the
"I transcript with hepatic tissue expression that diverts away from the
"I transcript with hepatic tissue expression that diverts away from the
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
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SEQUENCE 139 AA; 15611 MW; A62271872CA29DE4 CRC64;
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR-I (FRAGMENT).
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P79824
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09Y182
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Matches 106; Conservative
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Homo sapiens (Human).
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602
1 GPETLCGAELVDALQFVCGD.....TNKKMKSQRRKGSTFEEHK 111
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Copyright (c) 1993 - 2002 Compugen Ltd.
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76.7
76.7
74.3
69.6
67.1
66.8
66.8
66.8
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17.

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MEDLINE=91187000; PubMed=2082190;
                                                                                                                                                                                                                                                                                                                                                                                                                            NCB1_Tax1D=9796;
                                                                                                                                                                                                                                                                                                                                                                                (FRAGMENTS)
                                                                                                                                                                                         Query Match
                                                                                                                                                                                                   Best Local
                                                                                                                                               Signal.
                                                                                                                                                       SIGNAL
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                                                                                                                                                                                                           Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       26 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 85
        GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                 30 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (Human).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                Craniata; Vertebrata; Euteleostomi;
Catarrhini; Hominidae; Homo.
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0
                                                     90 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQ-RRKGSTFEERK 139
                                            61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRRKGSTFEEHK 111
                                                                                                                                                                                                                                                                                                                                                                                                           Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                                           0; Indels
                                                                                                                                                                                                                                                                                                                                                                                         970FBAAECFA0352D CRC64;
                                                                                                                                    Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                          Score 465; DB 4;
Pred. No. 5.2e-49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                           1; Mismatches
                                                                                                                                                                                                                                                                                       EMBL; M29644; AAA52543.1; -.
HSSP; P01343; IGF1.
InterPro; IPR000739; Insulin_IGF_relaxin.
                                                                                                                                                                                                                                                                                                                PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
ProDom; PD001048; Insulin_IGF_relaxin; 1.
                                                                                                                                                                                                                                                                                                                                                                        POTENTIAL.
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                                                                                                                           Created)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                    SEQUENCE FROM N.A. MEDLINE-88065102; PubMed~3683205;
                                                                                                                                                                                Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                          14406 MW;
                                                                                                                                                                                                                                                                                                                                            SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                          77.28;
98.88;
                                                                                                                         01-OCT-2000 (TrEMBLrel. 15, 01-OCT-2000 (TrEMBLrel. 15, 01-DEC-2001 (TrEMBLrel. 19,
                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                          PRELIMINARY;
                                                                                                                                                      IGF1 PROTEIN PRECURSOR.
                                                                                                                                                                         Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                         130 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                         Q9NP10
Q9NP10;
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Q14620;
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Tobin G., Yee D., Brunner N., Rotwein P.; "A novel human insulin-like growth factor I messenger RNA is expressed in normal and tumor cells." Mol. Endocrinol. 4:1914-1920(1990).
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-!- ALTERNATIVE PRODUCTS: TWO ISOFORMS; ISOFORM IGF-IA (P51458) AND
ISOFORM IGF-IB (SHOWN HERE); ARE PRODUCED BY ALTERNATIVE SPLICING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                33 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE OF 123-139 FROM N.A.

Nixon A.J., Toland B.D., Sandell L.J.;

Submitted (JAN-1997) to the EMBL/GenBank/DDBJ databases.

-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,

ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A

MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota, Metagoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-OCT-2000 (TrEMBLrel. 15, Last Sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR IB PRECURSOR (IGF-IB) (SOMATOMEDIN C)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INSULIN-LIKE GROWTH FACTOR I.
                                                                                                              -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY
-MEL; M37484; AAA52789.1; -
HSSP; P01343; 1GF1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE 137 AA; 15177 MW; BFCC0D11E32AB75D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; Pred. No. 5.5e-49; 1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                139 AA.
                                                                                                                                                                                                                          InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
PRODOM; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 77.2%; Score 465; 98.8%; Pred. No. 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-MAY-1997 (TrEMBLrel. 03, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=LIVER;
MEDLINE=97013467; Pubmed=8860303;
                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; U28070; AAA68952.1; -. EMBL; U85271; AAB47484.1; -. HSSP; P01343; 1GF1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE OF 1-122 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             85; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Equus caballus (Horse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     32
137
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us-09-852-261-6.rspt

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01-NOV-1998 (TrEMBLrel. 08, 01-NOV-1998 (TrEMBLrel. 08, 01-DEC-2001 (TrEMBLrel. 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              81; Conservative
                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity
                                                                                                                                                                                            NCBI_TaxID=10118;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
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                                                                                                             P97899
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093380
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                                                                                                                                                                                                                                            49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bos taurus (Bovine).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
                                                                                                                                                                                             Length 139;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 133;
                                                                        INSULIN-LIKE GROWTH FACTOR IB
                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 76.4%; Score 460; DB 6; Length 13
Best Local Similarity 97.7%; Pred. No. 2.2e-48;
Matches 84; Conservative 1; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       133 AA; 14674 MW; A6991DBCB75C103B CRC64;
                                                                                                                                                                           15612 MW; CDC0E8F19C261A2C CRC64;
                                                                                                                                                                                                                                                                     61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRRK 103
                                                                                                                                                                                                                                                                                109 CAPLKPAKSARSVR------YQPPSTNKKTKLQRRRK 139
                                                                                                                                                                                                                                                                                                                                                    01-077-2000 (TrEMBLrel. 15, Created)
01-077-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I (FRAGMENT).
                                                                                                                                                                                   Score 462; DB 6; Le
Pred. No. 1.3e-48;
                                                                                                                                                                                                                                                                                                                                     133 AA
                                                                                                                                       SIMILARITY.
                                                               BY SIMILARITY.
                                                                                                                                                SIMILARITY.
       PRINTS; PRO0277; INSULINB.
PRODOM; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00708, INGF; 1.
PROSTE; PS00262; INSULIN; UNKNOWN_1.
Insulin family; Growth factor; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
ProDom; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
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InterPro; IPR000739; Insulin_IGF_relaxin.
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D.
E PEPTIDE.
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BY
BY
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85.48;
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PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
                                                                                                                                                                                           Query Match 76.7
Best Local Similarity 85.4
Matches 88; Conservative
                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                100
                                                                                                                                                                           139 AA;
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SEQUENCE
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09N1C1;
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SEQUENCE FROM N.A.
MEDLINE=91103966; PubMed=1368571;
Kato H., Okoshi A., Miura Y., Noguchi T.;
A new cDNA clone relating to larger molecular species of rat insulinlike growth factor-I mRNA.";
Agric. Biol. Chem. 54.1599-1601(1990).
-! SUBJECLIJILAR LOCATION: SECREFED (BY SIMILARITY).
-! SUBJECLIJILAR LOCATION: SECREFED (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                       Rattus sp.
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
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9
                                                 88
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                            29 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVHIHHHHHHHHH
  GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ó
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Shimatsu A., Rotwein P.; "Mosaic evolution of the insulin-like growth factors."; J. Biol. Chem. 262:7894-7900(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CHAIN 23 92 POTENTIAL.
SEQUENCE 127 AA; 14106 MW; 104E126BCFCA5CB7 CRC64;
                                                                                                                                                                                                                                                                                                                      01-MAY-1997 (TrEMBLrel. 03, Created)
01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Last sequence update)
Last annotation update)
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                                                                                                                                                                                                                                                                          127 AA
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IIICEPPO; PR00079; Insulin_IGF_relaxin.
PFIGN: PR00079; Insulin_IGF_relaxin.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINA.
PROMO; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POTENTIAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PARTIAL SEQUENCE FROM N.A.
MEDLINE-87222423; PubMed=3034909;
                                                                                                   61 CAPLKPAKAARSVRAQRHTDMPKTQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ID AC DIT DIT DE DE DE DE DE DE DE OC OC
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SMART; SM00078; IlGF; 1.
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SEQUENCE
                         SEQUENCE
                                                  Query Match
                                                                                                                                                                                                                                          09IBI0;
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Q9IBI0
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                                                                                                                                                                                                                                                                                                                                              Archosauria; Aves; Neognathae; Galliformes; Meleagrididae; Meleagris.
NCBL_TaxID=9103;
                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                  1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Oncorhynchus tschawytscha (Chinook salmon) (King salmon).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
STRAIN-BIG QUALICUM RIVER, B.C.; TISSUE-LIVER;
MEDLINE-93247592; PubMed-7683374;
Wallis A.E., Devlin R.H.;
"Duplicate insulin-like growth factor-I genes in salmon display alternative splicing pathways.";
Mol. Endocrinol. 7:409-422(1993).
                                                                                                                                                                                                                                                                                                             ;
                                                                                                                                                                                                                                                                                       Length 153;
                                            STRAIN-BIG 6 ML TOM; TISSUE-LIVER;

CZETVINSKI S.M., AShwell C.M., McMuttry J.P.;

"Cloning of turkey insulin-like growth factor-I (IGF-I).";

Submitted (JUN-1998) to the EMBL/GenBank/DDBJ databases.
-!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
--- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.

EMBL; AF074980; AACZ6606.1; --
HSSP; P01343; IGF1.
                                                                                                                                                                                                                                       1 48 POTENTIAL.
49 118 INSULIN-LIKE GROWTH FACTOR-I.
153 AA; 17295 MW; 5AFIE5B8D13C70B5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (OCT-1994) to the EMBL/GenBank/DDBJ databases.
-!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                      Score 419; DB 13; Length 1
Pred. No. 2.6e-43;
4; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       [2]
SEQUENCE FROM N.A.
STRAIN-BIG QUALICUM RIVER, B.C.; TISSUE-LIVER;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   161 AA
                                                                                                                                                    Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINA.
PRIOPOM; PR001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPP000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRIMTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PD001048; Insulin_IGF_relaxin; 1.
                                                                                                                                                                                                                                                                                                                                                                                           109 CAPIKPPKSARSVRAQRHTDMPKAQK 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                      69.68;
88.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INSULIN-LIKE GROWTH FACTOR-I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; U15961; AAA67267.1;
HSSP; P01343; 1GF1.
                                                                                                                                                                                                                                                                                               Local Similarity 88.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                      Query Match
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Matches
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                                                                                                                                                                                                                                                 Liang Y.H., Cheng C.H., Chan K.M.;

"Insulin-like growth factor IE22 is the predominantly expressed form of IGF in common carp (Cyprinus carpio).";

"Insulin-like growth factor IE21 is the predominantly expressed form of IGF in common carp (Cyprinus carpio).";

"Insulin-like growth factor IE21 is 145-153(1996).

"Insulin-like IOCATION: SECRETED (BY SIMILARITY).

"INSULIN-IGF/RELAXIN FAMILY.

"EMBL: S8274; ABLONG: 70 THE INSULIN-IGF/RELAXIN FAMILY.

HSSP; P01343; IGF1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62 GPETLCGAELVDTLQFVCGDRGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY 121
                                                                                                                                                         Gaps
                                                                                                                                                                                                              1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cyprinus carpio (Common carp).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Ostariophysi;
Cypriniformes; Cyprinidae; Cyprinus.
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                                                                                                                                                                                                                                                                                                                                  61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTN----KKMKSQRRKGST 106
                                                                                       Length 161;
                                                                                                                                                                                                                                                                                                                                                              Length 178;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPP----STNKKMKSQRRKKGST 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19; Indels
                               161 AA; 17763 MW; A5A85D121377BF67 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        178 AA; 19687 MW; 7075A34FF379C459 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I SUBTYPE EA2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I PRECURSOR (FRAGMENT).
                                                                                                                                                      15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
66.9%; Score 403; DB 13;
Best Local Similarity 68.2%; Pred. No. 2.8e-41;
Matches 75; Conservative 12; Mismatches 19;
                                                                                       67.1%; Score 404; DB 13; 69.4%; Pred. No. 1.9e-41;
                                                                                                                   Local Similarity 69.4%; Pred. No. 1.9e-
nes 77; Conservative 13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          145 AA
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Pfam; PF00049; Insulin; 1.
PRINTS; PR00277; INSULINB.
ProDom; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE-LIVER;
MEDLINE=96241923; Pubmed=8680527;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Salmo salar (Atlantic salmon).
PROSITE; PS00262; INSULIN; 1.
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091965;
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                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                  19 GPETLCGAELVDTLQFVCGERGFFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY 78
                                                                                                                                                                                                                                                                                                                                                                                                   1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                            Duguay S.J., Park L.K., Samadpour M., Dickhoff W.W.;
"Nucleofide sequence and tissue distribution of three insulin-like
growth factor I prohormones in salmon.";
Mol. Endocrinol. 6:1202-1210(1992).
-1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Duguay S.J, Park L.K., Samadpour M., Dickhoff W.W.;
"Nucleotide sequence and tissue distribution of three insulin-like
growth factor I prohormones in salmon.";
Mol. Endocrinol. 6:1202-1210(1992).
-!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19) Last sequence update)
101-DEC-2001 (TrEMBLrel. 19) Last annotation update)
1NSULIN-LIKE GROWTH FACTOR I PRECURSOR (FRAGMENT).
0ncorhynchus kisutch (Coho salmon).
Eukaryotas Metazoa; Chordata, Craniata; Vertebrata; Euteleostomi;
Actinopterygii, Neopterygii; Teleostei; Euteleostei;
Protacanthopterygiis Salmoniformes; Salmonidae; Oncorhynchus.
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostel; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Salmo.
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                                                                                                                                                                                                                                                                                                                                                       Score 402; DB 13; Length 145;
Pred. No. 2.9e-41;
9; Mismatches 18; Indels
                                                                                                                                                                                                                                                                                                          INSULIN-LIKE GROWTH FACTOR
                                                                                                                                                                                                                                                                                                                                3D94EDF477268FC4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRR 101
                                                                                                                                                                                    InterPro; IPR000739; Insulin_IGF_relaxin.
Pram; PR00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINA.
PRIODOM; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                              POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
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                                                                                MEDLINE=93024477; PubMed=1406698;
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                                                                                                                                                                                                                                                                                1
18
>88
145
15885 MW; ...
                                                                                                                                                                                                                                                                                                                                                       66.8%;
73.3%;
                                                                                                                                                                EMBL; M81904; AAA18211.1;
HSSP; P01343; 1GF1.
                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 73.3
Matches 74; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
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19
145
145 AA;
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                                                        SEQUENCE FROM N.A.
TISSUE=LIVER;
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                                                                                                                                                                                                                                                                                                                   NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                       Signal.
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Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19 GPETLCGAELVDTLQFVCGERGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
NCBI_TaxID=74940;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Wallis A.E., Devlin R.H.; "Duplicate insulin-like growth factor-I genes in salmon display alternative splicing pathways."; Mol. Endocrinol. 7:409-422(1993).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 155;
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-!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Oncorhynchus tschawytscha (Chinook salmon) (King salmon)
                                                                                                                                                                                                                                                                                                                                          INSULIN-LIKE GROWTH FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (OCT-1994) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                        155 AA; 16968 MW; 022FD3CA39CA3160 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRR 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 402; DB 13;
                                                                                                                                                                                                                                                                                                                                                                      R -> X (IN REF. 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. 3.1e-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         188 AA
                                                                        InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
PRODOM; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
ProDom; PD001048; Insulin_IGF_relaxin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR000739; Insulin_IGF_relaxin
Pfam; PF00049; Insulin; 1.
                                                                                                                                                                                                                                                                                                                    POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-93247592; PubMed-7683374;
                                                                                                                                                                                                                                   PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INSULIN-LIKE GROWTH FACTOR-I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               66.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           73.38;
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EMBL; U14536; AAA67263.1; --
HSSP; P01343; IGF1.
                      EMBL; M81913; AAA49413.1;
HSSP; P01343; 1GF1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    74; Conservative
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                                                                                                                                                                                                                                                                                                           18
73
155
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TISSUE=LIVER;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A
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45 GPETLCGAELVDTLQFVCGERGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY 104
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Best Local Similarity 69.28
Matches 74; Conservative
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HSSP; P01343; 1GF1.
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                                                                                                                                                           1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
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Roberts C.T. Jr., Leroith D.;
"Isolation of a second nonallelic insulin-like growth factor I gene
from the salmon genome."
Isolation of a second nonallelic insulin-like growth factor I gene
from the salmon genome."
In the salmon genome.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Actinopterygii, Neopterygii; Teleostei, Euteleostei, Protacanthopterygii, Salmoniformes, Salmonidae, Oncorhynchus.
                                                                                                                                                                                                                                                                                                                                                                                                                           ol-aug-1998 (TrEMBLrel. 07, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I.1 PRECURSOR (IGF-I.1) (SOMATOMEDIN).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Multigene family; Signal.
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                                                                                 Length 188;
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SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
SEQUENCE 188 AA; 20782 MW; F4D705BA811024B8 CRC64;
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F4CEB6D05E0F24B8 CRC64;
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                                                                               Score 402; DB 13;
Pred. No. 3.9e-41;
9; Mismatches 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              66.8%; Score 402; DB 13; 73.3%; Pred. No. 3.9e-41; iive 9; Mismatches 18;
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PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
ProDom; PD001048; Insulin_IGF_relaxin; 1.
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InterPro; IPR000739; Insulin_IGF_relaxin.
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01-AUG-1998 (TrEMBLrel. 07, Last seq
01-DEC-2001 (TrEMBLrel. 19, Last anno
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SEQUENCE FROM N.A.
MEDLINE=94296559; Pubmed=8024699;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Oncorhynchus keta (Chum salmon)
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73.3%;
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Best Local Similarity 73.39
Matches 74; Conservative
                                                                                                  Local Similarity 73.3
Les 74; Conservative
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85
106
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45 GPETLCGAELVDTLQFVCGERGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY 104
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                                                                                                                                                                                                                                                                                                                                                                                                Oncorhynchus tschawytscha (Chinook salmon) (King salmon).
Mekaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygil; Neopterygil; Teleostei; Euteleostei;
Protacanthopterygil; Salmoniformes; Salmonidae; Oncorhynchus.
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 10, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
1NSULINFLIKE GROWTH FACTOR I PRECURSOR (FRAGMENT).
Oncorhynchus kisutch (Coho salmon).
Eukaryotai Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
NCBI_TAXID-8019;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
STRAIN-BIG QUALICUM RIVER, B.C.; TISSUE-LIVER;
MEDLINE-93347592; PubMed-7683374;
Mallis A.E., Devlin R.H.;
"Duplicate insulin-like growth factor-I genes in salmon display alternative splicing pathways.";
Mol. Endocrinol. 7:409-422(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 149;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (OCT-1994) to the EMBL/GenBank/DDBJ databases.
-!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRRKGSTF 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9AC8F072762D2AA0 CRC64;
                                                                                                                                                                                                                                                                                      01-NOV-1996 (TrEMBLrel. 01, Last sequence update) 01-DEC-2001 (TrEMBLrel. 19, Last annotation update) INSULIN-LIKE GROWTH FACTOR-I.
18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        66.1%; Score 398; DB 13;
69.2%; Pred. No. 9.2e-41;
ive 11; Mismatches 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
STRAIN-BIG QUALICUM RIVER, B.C.; TISSUE-LIVER;
                                                                                                                                                                                                      149 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Interpro; IPR000739; Insulin_IGF_relaxin.
Pfam: PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
ProDom; PD001048; Insulin_IGF_relaxin; 1.
SMART; SMO078; IIGF; 1.
SMART; SMO078; IIGF; 1.
SEQUENCE 149 AA; 16507 WW; 9AC8F072762D;
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TISSUE-LIVER;
MEDLINE=90190659; PubMed=2628735;
Cao Q.P. Duquay S.J. Plisetskaya E., Steiner D.F., Chan S.J.;
"Nucleotide sequence and growth hormone regulated expression of salmon insulin-like growth factor I mRNA.";
Mol. Endocrinol. 3:2005-2010(1989).
                                                                                                  Query Match 65.8%; Score 396; DB 13; Length 116; Best Local Similarity 70.8%; Pred. No. 1.2e-40; Matches 75; Conservative 11; Mismatches 12; Indels
                                                                                                                                                                                                                                                                                                                              POTENTIAL.
INSULIN-LIKE GROWTH FACTOR I.
                                                                                                                                                                                                                                                                                                                   1 1 POTENTIAL.
19 >88 INSULIN-LIKE GROWTH FACTOR
116 116 AA; 12697 MW; C5F378915179D89D CRC64;
                                                                                                                                                                                                                                                                                          PROSITE; PS00262; INSULIN; 1.
                                                                                          SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
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SEQUENCE
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version 5.1.3 - 2002 Compugen Ltd. GenCore Copyright (c) 1993

OM protein - protein search, using sw model

October 25,

2002, 15:55:02 ; Search time 12.7048 Seconds (without alignments) 839.517 Million cell updates/sec

US-09-852-261-6 Title: Perfect score:

602 1 GPETLCGAELVDALQFVCGD.....TNKKMKSQRRRKGSTFEEHK 111 Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

rched:

283138 seqs, 96089334 residues

Total number of hits satisfying chosen parameters:

283138

DB seq length: 0 DB seq length: 200000000 Minimum Maximum

Post-processing:

Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database

PIR_71:*
1: pir1:*
2: pir2:*
3: pir3:*
1: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	insulin-like growt	in-like	in-lïke		insulin-like growt	insulin-like growt	-like	n-like	-like	-like	-like	insulin-like growt	in-like	-like	in-like	-like	-like		like			insulin-like growt							
SUMMARIES	ū	A26859	IGHU1B	A40912	A27804	IGGP1	A36552	IGHU1	PN0622	IGB01	S12825	JC2483	S22878	A33390	A25540	B27804	B40912	A41399	A36079	C54270	C44012	A41396	A54270	B54270	D54270	A46244	S66485	A53697	B46244	T10897
	ength DB	,			181 2																									
ø	Query Match Length	89.5	89.0	86.5	84.4	77.2	77.2	77.2	76.4	76.4	76.4	75.7	75.1	75.1	74.8	74.3	71.3	9.69	68.5	67.1	8.99	66.8	66.8	8.99	66.1	66.1	50.1	49.5	45.2	40.9
	Score	539	536	521	508	465	465	465	460	460	460	456	452	452	450	447	429	₹"	412.5	404	402	402	402	402	398	398	301.5	298	272	246.5
	Result No.		7	3	7	2	9	7	œ	σ	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29

insulin-like growt	insulin - shorthor														
S04858	IGB02	IGHU2	157671	A38612	B60738	A24913	S02423	153642	IGRT2	167610	151240	S66484	A60740	A34049	INFIS
7	Н	Н	7	7	7	7	7	7	Н	7	7	7	7	7	7
179	155	180	128	139	181	180	183	93	180	183	79	210	99	44	20
40.2	39.2	38.5	38.4	38.0	38.0	37.7	37.6	37.4	37.3	36.6	35.5	34.8	32.7	29.1	26.5
242															
30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45

ALIGNMENTS

16-Jul-1999	differing within the	; PIDN:CAA29480.1; PID	.0
RESULT 1 A26859 insulin-like growth factor IB precursor - rat C;Species: Rattus norvegicus (Norway rat) C;Date: i9-Nov-1988 #sequence_revision 19-Nov-1988 #text_change 16-Jul-1999	C;Accession: A26859 R;Shimatsu, A.; Rotwein, P. Nucleic Acids Res. 15, 1956, 1987 A;Title: Sequence of two rat insulin-like growth factor I mRNAs differing within the A;Reference number: A26859; MUID:88015572	A, Molecule type: MRNA A, Residues: 1-159 <shi> A; Cross-references: GB:X06107; GB:M32260; GB:Y00429; NID:g56424; PIDN:CAA29480.1; PID C; Superfamily: insulin C; Kewords: alternative splicing; growth factor</shi>	Query Match Query Match Best Local Similarity 90.1%; Pred No. 2.2e-4% Matches 100. Chestrative 3. Mismatches 8. Indels 0. Gans

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49 GPETLCGAELVDALQEVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 108 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60 q ò

61 109 g δ

RESULT 2

Junealin-like growth factor I precursor, splice form B [validated] - human N.Alternate names: IGF-IB; somatomedin C
N.Alternate names: IGF-IB; somatomedin C
N.Contains: insulin-like growth factor IB-El amide
C.Species: Homo sapiens (man)
C.Date: 30-Jun-1887 #sequence_revision 30-Jun-1987 #text_change 31-Dec-2000
C.Accession: A01611, A26181; S30340; B48960; A42664
R.Rotwein, P.; Pollock, K.M.; Didler, D.K.; Krivi, G.G. J. Biol. Chem. 261, 4828-4832, 1986
A.Title: Organization and sequence of the human insulin-like growth factor I gene. Al A.Reference number: A92581; MUID:86168194
A.Residues: 1-195 <ROTI> A.Residues: 1-195 <ROTI> A.Residues: 1-195 <ROTI> A.Residues: 1-195 <ROTI> A.Cross-references: GB:M14155; NID:g183106; PIDN:AAA52537.1; PID:g183109

Proc. Natl. Acad. Sci. U.S.A. 83, 77-81, 1986. A;Title: Two insulin-like growth factor I messenger RNAs are expressed in human liver A;Reference number: A26181; MUID:86094355 A;Accession: A26181 A;Molecule type: mRNA

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insulin-like growth factor I precursor - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 09-Jun-1988 #sequence_revision 09-Jun-1988 #text_change 16-Jul-1999
C;Date: 09-Jun-1980 #sequence_revision 09-Jun-1988 #text_change 16-Jul-1999
C;Date: 09-Jun-1980 #s.Shimatsu, A; Rotweln, P. J. Biol. Chem. 262, 7894-7900, 1987
J. Biol. Chem. 262, 7894-7900, 1987
A;Title: Mosaic evolution of the insulin-like growth factors. Organization, sequence, A;Reference number: A27804; MUD:87222423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Status: preliminary
A; Molecule type: DNA
A; Molecule type: DNA
A; Residues: 1-181 < SH1.
A; Cross references: GB:M15650; GB:J02743; NID:g204296; PIDN:AAA41214.1; PID:g204299
A; Residues: 1.181 < SH2
A; Cross references: GB:M15650; GB:J02743; NID:g204296; PIDN:AAA41214.1; PID:g204299
B; Roberts, C.T.
B; Roberts, C.T.
B; Roberts, C.T.
A; Reference number: 152218; MUD:87298553
A; Reference number: 152218; MUD:87298553
A; Accession: 165202
A; Accession: 165202
A; Molecule type: MRNA
A; Residues: 1-27 < RES>
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C;Sate: 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change 07-Nov-1997
C;Accession: S12719
R;Bell, G.L.; Stemplen, M.M.; Fong, N.M.; Seino, S.
Nucleic Acids Res. 18, 4275, 1990
A;Tilte: Sequence of a cDNA encoding quinea pig IGF-I.
A;Reference number: S12719; MUID:90332447
A;Reference number: S12719; MUID:90332447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   49 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                       1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                           23 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: GB:M17594; NID:g204759; PIDN:AAA41390.1; PID:g204760 C;Superfamily: insulin C;Keywords: alternative splicing
                                           PIDN: AAA41385.1; PID: 9204750
                                                                                                                                                                                                                  ;
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                                                                                                                                                Length 133;
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Pred. No. 3.9e-45;
                                                                                                                                                Score 521; DB 2; L
Pred. No. 1.3e-46;
3; Mismatches 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    insulin-like growth factor I precursor - guinea pig
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       A;Residues: 1-133 <ROB>
A;Cross-references: GB:M15480; NID:g204749;
C;Superfamily: insulin
                                                                                                                                             Query Match
Best Local Similarity 87.4%;
Matches 97; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     84.48;
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Best Local Similarity
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A.Residues: 1-195 <SA2>
A.Rofrosz-references: GB:X56774; GB:S61860; NID:g32991; PIDN:CAA40093.1; PID:g32992
A.Rofrosz-references: GB:X56774; GB:S61860; NID:Backbone
A.Note: sequence modified after extraction from NCBI backbone
A.Note: sequence extracted from NCBI backbone (NCBIN:133058)
Siegfiried, J.M.; Kasprzyk, P.G.; Treston, A.M.; Mulshine, J.L.; Quinn, K.A.; Cuttitta, Siegfiried, J.M.; Kasprzyk, P.G.; Treston, A.M.; Mulshine, J.L.; Quinn, K.A.; Cuttitta, A.Title: A mitogenic peptide anide encoded within the E peptide domain of the insulin-li A.Reference number: A42664; MUID:92290398
A:Contents: annotation; IBE-1; amidated carboxyl end
                                                                                                                                  A:Reference number: $30540
A:Accession: $30540
A:Accession: $30540
A:Molecule type: mRNA
A:Residues: 1-195 <SAN>
A:Cossion: $30540
A:Coss-references: EMBL:X56774; NID:g32991; PIDN:CAA40093.1; PID:g32992
B:Sandberg-Nordqvist, A.C.; Stahlbom, P.A.; Reinecke, M.; Collins, V.P.; von Holst, H.;
A:Title: Characterization of insulin-like growth factor 1 in human primary brain tumors. A:Accession: B48960; MuID:g3265440
A:Accession: B48960
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C.Superfamily: insulin
C.Superfamily: insulin
C.Superfamily: insulin
C.Superfamily: sugar sequence #status predicted <SIG>
F;1-21-40main: sigaral sequence #status predicted <SIG>
F;2-2-48/Domain: sigaral sequence #status predicted <PRO>
F;49-118/Product: insulin-like growth factor I #status predicted <MAT>
F;49-118/Product: insulin chain B-like #status predicted <CHB>
F;78-89/Domain: insulin chain B-like #status predicted <CHA>
F;90-110/Domain: insulin chain A-like #status predicted <CHA>
F;90-110/Domain: arboxyl-terminal propeptide (E peptide) #status predicted <CHE>
F;111-118/Pomain: arboxyl-terminal propeptide (E peptide) #status predicted <MAZ>
F;151-172/Product: insulin-like growth factor IB-El amide #status predicted <MAZ>
F;54-96,66-109,95-100/Disulfide bonds: #status predicted
F;172/Modified site: amidated carboxyl end (Arg) (amide in mature form from following experiments)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .;
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C;Species: Rattus norvegicus (Norway rat)
C;Date: 28 Feb-1992 #sequence_revision 28 Feb-1992 #text_change 16-Jul-1999
C;Accession: A40912
R;Roberts Jr., C.T.; Lasky, S.R.; Lowe Jr., W.L.; Seaman, W.T.; LeRoith, D.
Mol. Endocrinol 1, 243-248, 1987
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A;Cross-references: GB:M11568; NID:g183111; PIDN:AAA52539.1; PID:g183112 R5.Sandberg Nordqvist, A.C.; Stahlbom, P.A.; Lake, M.; Sara, V.R. submitted to the EMBL Data Library, November 1990 A;Description: Nucleotide sequence of the human fetal brain IGF-1b.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
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Pred. No. 5.4e-48;
2; Mismatches 2; Indels
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Best Local Similarity 96.1%;
Matches 98; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Map position: 12q22-12q24.1
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A;Molecule type: mRNA A;Residues: 1-137 <BEL> A;Cross-references: EMBL:X52951 A;Note: it is uncertain whether Met-1 or Met-8 is the initiator

A; Title: Molecular cloning of rat insulin-like growth factor I complementary deoxyribon

c tissues. A;Reference number: A40912; MUID:88288198

a ŏ g A; Status: preliminary

```
A; Note: sequence extracted from NCBI backbone (NCBIN:133056, NCBIP:133057)
A; Note: sequence inconsistent with the nucleotide translation
R;Rall, L.B.; Scott, J. Bell, G.I.
A;Rall, L.B.; Scott, J. 98-248, 1987
A;Title: Human insulin-like growth factor I and II messenger RNA: isolation of comple A; Reference number: 157044; MUID:88065102
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A; Molecule type: mRNA
A; Moledues: 1-153 < MONA
A; Residues: 1-153 < MONA
A; Cross-references: EMBL: X56773; NID: 932989; PIDN: CAA40092.1; PID: 932990
B; Sandberg-Nordqvist, A.C.; Stahlbom, P.A.; Reinecke, M.; Collins, V.P.; von Holst, H
Cancer Res. 53, 2475-2478, 1993
A; Title: Characterization of insulin-like growth factor 1 in human primary brain tumo
A; Reference number: A48960; MUID: 93265440
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A.Reference number: A23622; MUID:86108910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Note: Met-24 is proposed as a likely initiator
R;Steenbergh, P.H.; Koonen-Reemst, A.M.C.B.; Cleutjens, C.B.J.M.; Sussenbach, J.S.
Biochem. Biophys. Res. Commun. 175, 507-514, 1991
A;Title: Complete nucleotide sequence of the high molecular weight human IGF-I mRNA.
A;Reference number: JT0571; MUID:91207342
                                                                                                                                                      NID:g33020; PIDN:CAA27152.1; PID:g33021; A.T.; Bullock, B.; Woods, D.E.; Gabbay, P.
                                                                                                                                                                                                   RiJansen, M.; van Schaik, F.M.A.; Ricker, A.T.; Bullock, B.; Woods, D.E.; Gabbay Mature 306, 609-611, 1983
A; Title: Sequence of CDNA encoding human insulin-like growth factor I precursor. A; Reference number: A93321; MUID:84068210
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A;Cross-references: GB:M29644; NID:g183119; PIDN:AAA52543.1; PID:g183120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Cross-references: EMBL: X57025; NID: g33007; PIDN: CAA40342.1; PID: g33008
                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Molecule type: mRNA
A;Residues: 1-153 </AN>
A;Cross-references: GB:X00173; NID:g33015; PIDN:CAA24998.1; PID:g33016
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A; Residues: 49-53, X',55-65, X',67-75 <KAR>
A; Residues: 49-53, X',55-65, X',67-75 <KAR>
A; Experimental source: platelet lysate
R; Nordqvist Sandberg, A.C.; Stahlbom, P.A.; Lake, M.; Sara, V.R.
submitted to the EMBL Data Library, November 1990
A; Description: Nucleotide sequence of the human fetal brain IGF-la.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R;Le Bouc, Y.; Dreyer, D.; Jaeger, F.; Binoux, M.; Sondermeyer, P. FEBS Lett. 196, 108-112, 1986
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A; Residues: 1-123, E', 125-132, E', 134-153 <SAN>
A; Cross-references: GB:X56773; GB:S61841; NID:932989
A; Experimental source: anaplastic oligodendroglioma
A; Note: sequence extracted from NCBI backbone (NCBIN:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
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A;Residues: 49-118 KRIN>
K;Karey, K.P.; Marquardt, H.; Sirbasku, D.A.
B]cod 74, 1084-1092, 1989
                                                                                                                                                           A; Cross-references: GB: X03420; GB: X00362;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Reference number: S30519
A; Accession: S30519
                                                                                                         A; Residues: 24-153 < DEP>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: mRNA
A; Residues: 1-153 <STE>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Accession: A23622
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A;Title: Organization and sequence of the human insulin-like growth factor I gene. Alter A;Reference number: A92581; MUID:86168194
A;Molecule type: DNA A;Residues: 1-153 <ROT>
A;Cross-references: GB:M14156; NID:g183107; PIDN:AAA52538.1; PID:g183110
R;de Pagter Holthuizen, P.; van Schaik, F.M.A.; Verduijn, G.M.; van Ommen, G.J.B.; Bouma FEBS Lett. 195, 179-184, 1986
A;Title: Organization of the human genes for insulin-like growth factors I and II.
A;Reference number: A91356; MUID:86108862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             expressed in normal
C; Superfamily: insulin
C; Superfamily: insulin
C; Keywords: glycopctein; growth factor; plasma
C; Keywords: glycopctein; growth factor is factor growth factor is factor is factor is factor is factor insulin-like growth factor is factor is factor insulin-like growth factor is factor growing conformation insulin connecting C peptide-like factor gredicted <CHC>F: 73-617/Domain: insulin connecting C peptide-like factor gredicted <CHC>F: 74-94/Domain: insulin chain A-like factor gradicted <CHA>F: 95-102/Domain: carboxyl-terminal propeptide (E peptide) factor gredicted <CHE>F: 124/Binding site: carbohydrate (Asn) (covalent) factor gradicted
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Date: 12-Apr-1991 #sequence_revision 12-Apr-1991 #text_change 16-Jul-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Gaps
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C; Species: Homo sapiens (man)
C; Date: 12-Apr-1991 #sequence_revision 12-Apr-1991 #text_change 16-Jul-19
C; Accession: A3652
R; Toblo, G; Yee, D; Bruenner, N.; Rotwein, P.
Mol. Endocrinol. 4, 1914-1920, 1990
A; Title: A novel human insulin-1ke growth factor I messenger RNA is expr
A; Reference number: A36552; MUID:91187000
A; Status: preliminary
A; Status: preliminary
A; Molecule type: mRNA
A; Residues: 1-137 <TOB>
A; Cross-references: GB: M37484; NID:9184833; PIDN:AAA52789.1; PID:9184834
C; Superfamily: insulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 137;
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Pred. No. 8.2e-41;
1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. 8.2e-41;
1; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 465;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAPLKPAKAARSVRAQRHTDMPKTQK 86
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98.8%;
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98.8%;
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A;Title: Nucleotide sequence of the bovine insulin-like growth factor 1 (IGF-1) and i A;Reference number: S12672; MUID:90175014
A;Accession: S12672
        Nucleic Acids Res. 18, 676, 1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
nes 84; Conserv
                                                                                                                    A; Molecule type: mRNA
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Matches
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A;Residues: 1-122 <DBL>
C;Comment: This protein is a potent inducer of DNA synthesis in multiple cell types, act
C;Comment: The insulin-like growth factors, isolated from plasma, are structurally and C;Comment: For an alternative splice form, see PIR:IGHUIB.
                                                                                                                                   A.Map position: 12q22-12q34.1
A.Introns: 21/3; 74/1; 134/3
C.Superfamily: insulin
C.Superfamily: insulin
C.Superfamily: insulin
F.1-21/Domain: signal sequence #status predicted <STG>
F.12-48/Domain: propeptide #status predicted <PRO>
F.22-48/Domain: propeptide #status predicted <PRO>
F.49-118/Product: insulin-like #status experimental <CHB>
F.49-118/Promain: insulin chain B-like #status experimental <CHB>
F.49-118/Domain: insulin chain B-like #status experimental <CHC>
F.90-110/Domain: insulin chain B-like #status experimental <CHA>
F.90-110/Domain: insulin chain B-like #status experimental <CHA>
F.90-110/Domain: chain A-like #status experimental <CHA>
F.111-118/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CPRO>
F.119-153/Domain: carboxyl-terminal propeptide (E peptide) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C;Superfamily: insulin
C;Keywords: growth factor
20-89/Product: insulin-like growth factor Ia (fragment) #status predicted <MAT>
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C;Species: Canis lupus familiaris (dog)
C;Date: 10-Mar-1994 #sequence_revision 10-Mar-1994 #text_change 07-May-1999
C;Accession: PN0622
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N;Alternate names: IGF-I; somatomedin C
C;Species: Bos primigenius taurus (cattle)
C;Date: 31-Mar-1988 #sequention 28-Apr-1995 #text_change 18-Jun-1999
C;Accession: S12672; A25623; S00465
R;Fotsis, T.; Murphy, C.; Gannon, F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ch 77.2%; Score 465; DB 1; Length 153; 1 Similarity 98.8%; Pred. No. 9.1e-41; 85; Conservative 1; Mismatches 0; Indels
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0; Indels
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A;Title: Sequence of a cDNA encoding dog insulin-like growth A;Reference number: PN0622: MUID:99366192
A;Accession: PN0622
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1; Mismatches 1;
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                                                                                                              A; Cross-references: GDB:120081; OMIM:147440
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Matches 84; Conserv
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                                                                                      A; Gene: GDB: IGF1
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                                                        C; Genetics:
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A; Resterence number: A92303; MULD: OUND: OUND: OUND: OUND: OUND: A ACCESSION: A25623
A; Molecule type: protein
A; Residues: 49-118 -GHON.
B; Residues: 49-118 -GHON.
B; Residues: 49-118 -GHON.
B; Residues: 50.4.5; MULD: 88268820
A; Title: Insulin-like growth factors 1 and 2 in bovine colostrum. Sequences and biolo A; Reference number: 500465; MULD: 88268820
A; Molecule type: protein
A; Residues: 49-118 -GRAN
A; Note: a form of IGF-I lacking the first three residues and possessing enhanced biol C; Superfimental source: colostrum
A; Note: a form of IGF-I lacking the first three residues and possessing enhanced biol C; Superfimental source: colostrum
C; Superfimental source: colostrum
A; Note: a form of IGF-I lacking the first three residues and possessing enhanced biol C; Superfimental source: colostrum
C; Superfimental source: colostrum
A; Note: a form of IGF-I lacking the first three residues and possessing enhanced biol C; Superfimental source: colostrum
C; Superfimental source: colostrum
A; Note: a form of IGF-I lacking feature creative of Sigo-F; 118/Product: insulin like growth factor IA (active) #status experimental condon: insulin A chain-like #status experimental condon: F; 78-89/Domain: insulin A chain-like #status experimental condon: F; 78-89/Domain: insulin A chain-like #status experimental condon: F; 78-89/Domain: insulin D peptide #status experimental condon: F; 78-89/Domain: D peptide #status experimental condon: F; 78-89/Domain: D peptide #status experimental condon: F; 78-86, 66-109, 95-100/Disulfide bonds: #status predicted
E; 54-96, 66-109, 95-100/Disulfide bonds: #status predicted
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A; Residues: 1-153 <FOT>
A; Residues: 1-153 <FOT>
A; Cross-references: BMBL:X15726; NID:g454; PIDN:CAA33746.1; PID:g455
A; Exportimental source: 11ver
R; Honegger, A.; Humbel, R.E.
T; Bolo Chem. 261, 569-575, 1986
A; Title: Insulain-like growth factors I and II in fetal and adult bovine serum. Purifit A; Reference number: A92585; MUID:86085881
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           76.4%; Score 460; DB 1; ilarity 97.7%; Pred. No. 3e-40; Conservative 1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                insulin-like growth factor I precursor - pig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         109 CAPLKPAKSARSVRAQRHTDMPKAQK 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
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Genetics:

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A) Residues: 1-43, SS', 46-154 <WON>
A) Residues: 1-43, SS', 46-154 <WON>
A) Cross-references: GB:M30653; NID:g165929; PIDN:AAR80532.1; PID:g165930
R;Hey, A.W.; Browne, C.A.; Simpson, R.J.; Thorburn, G.D.
Biochim. Biochim. Biophys: Acta 997, 27-35, 1989
A;Title: Simultaneous isolation of insulin-like growth factors I and II from adult sh
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N.Alternate names: somatomedin C
C; Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C; Daccies: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C; Daccies: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C; Daccession: S22877; A33390; S07965; S07198
R; Dickson, M.C.; Saunders, J.C.; Gilmour, R.S.
J. Mol. Endocrinol. 6, 17-31, 1991
A; Title: The ovine insulin-like growth factor-I gene: characterization, expression an A; Reference number: S22877; MUID: 91197361
insulin-like growth factor I precursor, splice form 2 - sheep
C;Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C;Date: 23-Apr-1999 #sequence_revision 23-Apr-1999 #text_change 23-Jul-1999
C;Accession: S22878; S07198
R;Dickson, M.C.; Saunders, J.C.; Gilmour, R.S.
J. Mol. Endocrinol. 6, 17-31, 1991
A;Title: The ovine insulin-like growth factor-I gene: characterization, expression an A;Reference number: S22877; MUID:91197361
A;Accession: S22878
A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                            A; Wolecule type: DNA
A; Residues: 1-138 <DIC.>
A; Cross-references: EMBL.>
A; Cross-references: EMBL.>
A; Cross-references: EMBL. K.A.; Wallace, J.C.; Ballard, F.J.; Owens, P.C.
Endocrinology 124, 1173-1183, 1989
A; Title: Sheep insulin-like growth factors I and II: sequences, activities and assays
A; Reference number: S07198; MUID:89136887
A; Accession: S07198
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A; Residues: 34-103 < PRA>
A; Experimental source: fetal plasma
C; Genetics:
A; Introns: 5/3; 59/1; 119/3
C; Superfamily: insulin
C; Reywords: alternative splicing; growth factor; plasma
E; 7-33/Domain: propeptide #status predicted < PRO>
F; 34-103/Product: insulin-like #status predicted < PRO>
F; 34-103/Product: insulin-like #status predicted < DOB>
F; 34-103/Promain: insulin chain B-like #status predicted < DOB>
F; 34-103/Promain: insulin chain A-like #status predicted < DOB>
F; 55-55/Domain: insulin chain A-like #status predicted < DOB>
F; 56-103/Domain: peptide D #status predicted < DOA>
F; 56-103/Domain: carboxyl-terminal propeptide (E peptide) #status predicted < TP>
F; 103-103/Domain: sarboxyl-terminal propeptide (E peptide) #status predicted < TP>
F; 103-103/Domain: Sarboxyl-terminal propeptide (E peptide) #status predicted < TP>
F; 103-103/Domain: Paptide Donds: #status predicted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            34 GPETLCGAELVDALGFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 452; DB 2;
Pred. No. 1.8e-39;
1; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                75.1%;
96.5%;
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A;Residues: 1-154 <DIC>
A;Cross-references: EMBL:X51358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
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Matches 83; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: mRNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94
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C;Species: Capra aegagrus hircus (domestic goat)
C;Date: 16-Mar-1995 #sequence_revision 26-May-1995 #text_change 17-Mar-1999
C;Accession: JC2483
R;Mikawa, S.; Yoshikawa, G.; Aoki, H.; Yamano, Y.; Sakai, H.; Komano, T.
Biosci. Biotechnol. Biochem: 59, 87-92, 1995
File: Dynamic aspects in the expression of the goat insulin-like growth factor-I (IGE eference number: JC2483; MUID:95201385
                                                                                                               A; Reference number: A34938; MUD:89096956
A; Reference number: A34938; MUD:89096956
A; Accession: A34938
A; Mocente type: mRNA
A; Residues: 'Y'. 21-153 <TAV>
A; Cross-references: GB.1175
B; Francis, G.L.; Owens, P.C.; Mallace, J.C.; Ballard, F.J.
J; Endocrinol. 122, 681-687, 1989
A; Title: Purification, amino acid sequences and assay cross-reactivities of porcine insu A; Reference number: A60738; MUID:90039035
A; Accession: A60738
                 R;Tavakkol, A.; Simmen, F.A.; Simmen, R.C.M.
Mol. Endocrinol. 2, 674-681, 1988
A;Title: Porcine insulin-like growth factor-I (pIGF-I): complementary deoxyribonucleic
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A. Residues: 1-154 <MIK>
A. Cross-references: GB:S11378; DDBJ:D26116; DDBJ:D26117; DDBJ:D26118; C. Genetics:
A. Introns: 21/3; 75/1; 135/3
C. Superfamily: insulin squence #status predicted <SIG>
F:104/Pomain: signal sequence #status predicted <SIG>
F:50-119/Product: insulin-11ke growth factor-I #status predicted <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      c, keywords: growth factor
F;1-22/Domain: signal sequence #status predicted <SIG>
F;23-48/Domain: propeptide #status predicted <PRO>
F;49-153/Product: insulin-like growth factor IA #status experimental
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96.5%; Pred. No. 7.8e-40;
Mismatches 2;
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Pred. No. 3e-40;
1; Mismatches
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Best Local Similarity 97.7%;
Matches 84; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: protein
A; Residues: 49-117, 'X' <FRA>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ntrons: 21/3; 74/1
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RESULT 12 S22878

Matches

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A Molecule type: mRNA
A; Residues: 27-f153 <00.50
A; Cross-references: GB:MJ7335; NID:g204751; PIDN:AAA41386.1; PID:g204752
A; Cross-references: GB:MJ7335; NID:g204751; PIDN:AAA41386.1; PID:g204752
R; Kato, H.; Okoshi, A.; Miura, Y.; Noguchi, T.
Agric. Biol. Chem. 54, 1599-1601, 1990
A; Title: A new CDNA clone relating to larger molecular species of rat insulin-like gr
A; Reference number: JH0133; MUID:91103966
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A.Experimental source: liver
R.Murphy, L.J.; Bell, G.I.; Duckworth, M.L.; Friesen, H.G.
Endocrinology 121, 684-691, 1987
A.Title: Identification, characterization, and regulation of a rat complementary deox
A.Reference number: A28504; MUID:87246437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: mRNA
A; Residues: 46-153 <MUR>
A; Residues: 46-153 <MUR>
A; Residues: 46-153 <MUR>
A; Cross-references: GBEMIT714; NID:9204324; PIDN:AAA41227.1; PID:9204325
B; Kato, H.; Takenaka, A.; Miura, Y.; Nishiyama, M.; Noguchi, T.
Agric. Biol. Chem. 54, 2225-2230, 1990
A; Title: Evidence of introduction by molecular cloning of artificial inverted sequence.
A; Reference number: JN0088; MUID:91136779
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A,Residues: 'MSAPP',22-153 <KA2>
A,Experimental source: liver
A,Note: the authors present evidence that this mRNA may contain an artifactual invers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       insulin-like growth factor IA precursor - rat
N;Alternate names: IGF-IA; somatomedin C
C;Species: Rattus norvegicus (Norway rat)
C;Date::lo-Mar-1989 #sequence_rovision 16-Mar-1989 #text_change 21-Jul-2000
C;Accession: B27804; A27849; JH0133; A28504; JN0088; A32857; A61096
R;Shimatsu, A.; Rotwein, P.
J; Biol. Chem. 262, 7894-7900, 1987
A;Title: Mosaic evolution of the insulin-like growth factors. Organization, sequence, A;Reference number: A27804; MUID:87222423
                                                                                                                                                                                                                                                                                                                                                                                            predicted <CTP>
                                   C. Superfamily: insulin
C. Keywords: alternative splicing; growth factor
C. Keywords: alternative splicing; growth factor
F.1-22/Domain: signal sequence #status predicted <SIG>
F.23-127/Product: insulin-like growth factor IA (active) #status predicted
F.23-51/Domain: insulin connecting C peptide-like #status predicted <DOD>
F.52-63/Domain: insulin connecting C peptide-like #status predicted <DOC>
F.64-84/Domain: insulin chain A-like #status predicted <DOD>
F.85-92/Domain: D peptide #status predicted <DOD>
F.93-127/Domain: carboxyl-terminal propeptide (E peptide) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23 GPETLCGAELVDALQEVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 82
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 127;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            74.8%; Score 450; DB 2; L 95.3%; Pred. No. 2.7e-39; tive 1; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 95.3
Matches 82; Conservative
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A; Molecule type: mRNA
A; Residues: 27-153 <KAT>
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Accession: A2324

Molecule type: mRNA

Accession: A2324

Accession: A2340

Accession: A2340

Accession: A24, 13810-13817, 1989

Accession: 15529

Accession: 155295; MUD: 89340472

Accession: 155295

Accession: 155295; MUD: 89340472

Accession: 155295

Accession: Accession: Accession: Accession of IGF-I, the Mathews L.S.; Norstedt, G.; Palmiter, R.D.

Proc. Natl. Acad. Sci. U.S.A. 83, 9343-9347, 1986

Accession: 159090; MUD: 87092249

Accession: 159090

Accession: 150900

Accession:
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C; Species: Mus musculus (house mouse)
C; Date: 30-Un-1988 #sequence_revision 30-Jun-1988 #text_change 16-Jul-1999
C; Accession: A25540; 155295; 159090; B25540
R; Bell, G.I.; Stemplen, M.M.; Fong, N.M.; Rall, L.B.
Nucleic Acids Res. 14, 7873-7882, 1986
A; Title: Sequences of liver cDNAs encoding two different mouse insulin-like growth factch A; Accession: A25540.
                                                                           A; Molecule type: protein
A; Residues: 50-79 <HRTY
R; Francis, G.L.; McNeil, K.A.; Wallace, J.C.; Ballard, F.J.; Owens, P.C.
Endocrinology 124, 1173-1183, 1989
A; Title: Sheep insulin-like growth factors I and II: sequences, activities and assays.
A; Reference number: 507198; MUID:89136887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Deptimient source. Lower process.
A; Introns: 21/3; 75/1; 135/3
C; Genetics:
A; Introns: 21/3; 75/1; 135/3
C; Superfamily: insulin
C; Reywords: alternative splicing; growth factor; plasma
F; 1-21/Domain: signal sequence #status predicted <SIG>F; 2-49/Domain: propeptide #status predicted <PRO>F; 2-49/Domain: insulin-like growth factor I (active) #status experimental <AMT>F; 50-18/Product: insulin chain B-like #status predicted <DOB>F; 79-90/Domain: insulin connecting peptide-like #status predicted <CHC>F; 91-111/Domain: insulin chain B-like #status predicted <DOB>F; 91-111/Domain: peptide D #status predicted <CHD>F; 91-111/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>F; 55-97, 67-110, 96-101/Disulfide bonds: #status predicted
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Pred. No. 2e-39;
1; Mismatches 2; Indels
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A; Reference number: S04972; MUID:89323215
A; Accession: S07965
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                                                                                                                                                                                                                                                                                                                                                                               A;Molecule type: protein
A;Residues: 50-119 <FRA>
A;Experimental source: fetal plasma
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1 Similarity 96.5%;
83; Conservative
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Best Local Similarity
Matches 83; Conserv
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R; Tamura, K.; Kobayashi, M.; Ishii, Y.; Tamura, T.; Hashimoto, K.; Nakamura, S.; Niwa, M. J. Biol. Chem. 264, 5616-5621, 1989
A; Title: Primary structure of rat insulin-like growth factor-I and its biological activing A; Reference number: A32857; MUID:89174609
A; Rocession: A32857
A; Molecule type: protein
A; Residues: 49-118 (FAMA)
B; Ganalis. E.; McCarthy, T.; Centrella, M.
Bidocrinology 122, 22-27, 1988
A; Title: Isolation and characterization of insulin-like growth factor I (somatomedin-C)
A; Reference number: A61096; MUID:88082445
A; Rocession: A61096
A; Molecule type: protein
A; Residues: 49-33, X, 55-65 < CAN>
C; Superfamily: insulin
C; Keywords: alternative splicing; growth factor I #status experimental <ILG>
F; 49-118/Product: insulin-like growth factor I #status experimental
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Search completed: October 25, 2002, 15:59:29 Job time : 13.7048 secs

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Non Oct 28 09:44:50 2002

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October 25, 2002, 15:52:06; Search time 25.4096 Seconds (without alignments) 485.217 Million cell updates/sec
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GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
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                                                                                                                                   - protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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Maximum DB seq length: 2000000000
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Human IGF-I protei Goat Insulin like Human insulin like Rabbit liver-type Human prepro-somat Rabbit liver-type	Chimeric rhigf. 1-A Pep 17 used in nuc Peptide ligand Pep Nuclear ligand Pep Nuclear ligand Pep Rainbow trout insu Flatfish insulin-1	Insulin-like growt Recombinant botuli Sequence of human Sequence of oxidat Sequence of human New insulin-like of	Insulin-like growt hIGF-I. Homo sapi Peptide derived fr Human IGF-I peptid Sequence of insuli Human insulin-like Insulin like growt	Wild type IGF-1 se Recombinant insuli Peptide derived fr Human mature insul Human insulin-like Human insulin-like Human insulin-like Insulin like growt Amino acid sequenc
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AAE 0844 AAE 0844 AAE 03302 AAE 02452 AAE 02456	AAW64068 AAY98482 AAY59027 AAU04272 AAB45835 AAR8089	AAP81212 AAW56011 AAP40034 AAP70414 AAP71539 AAP91502	AAR36846 AAR41774 AAR43606 AAR48590 AAR55275 AAR75657	AAR87744 AAR89949 AAW33907 AAW12342 AAB12772 AAB12772 AAB09616
114 118 122 7	19 21 22 22 22 17	10 88 21 9	114 114 115 116	17 17 18 18 21 21 21 21
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113 113 115 116	2221 232 243	35576 35576 3058		338 399 444 444 3444 364 364 364 364

ALIGNMENTS

AAE02448 standard; Protein; 111 AA.

RESULT 1 AAE02448 10-AUG-2001 (first entry)

AAE02448;

Rat; IGF-I isoform; Insulin-like Growth Factor-I; MGF; menchano-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; poliomyelitis; post-polio syndrome; toxin; motoneurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease. Rat IGF-I isoform mechano-growth factor (MGF) protein. 15-NOV-2000; 2000WO-GB04354. 99GB-0026968 (UNLO) UNIV COLLEGE LONDON Goldspink G, Johnson I; WPI; 2001-355620/37. N-PSDB; AAD06399. WO200136483-A1. 15-NOV-1999; 25-MAY-2001. Rattus sp.

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an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a medicament for the treatment of neurological disorder. The MGF is capable of reducing motoneurone loss by 20% or greater in response to nerve avulsion, and effects motoneurone rescue, preferably adult motoneurone rescue. The MGF polynucleotide and polypeptide are useful in the manufacture of a medicament for the treatment of a neurological disorder, including a disorder of motoneurones and/or neurodegenerative disorder, e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive spinal muscular atrophy, infantile or juvenile muscular atrophy, progressive poliomyelitis or post-polio syndrome, a disorder caused by exposure to a
                                                                                                                                                                                                                                                                                                                                                                                                                                      toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an injury that affects motoneurones, motoneurone loss associated with aging, autosomal or sex-linked muscular dystrophy, diabetic neuropathy, peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The present sequence is rat IGF-I isoform MGF: MGF is a muscle isoform having extracellular (Ec) domain, hence also referred as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rabbit; IGF-I isoform; Insulin-like Growth Factor-I; MGF; mechano-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclenosis; spinal muscular atrophy; muscular atrophy; poliomyelltis; post-polio syndrome; toxin; motoneurone disorder; poliomyelltis; post-polio syndrome; toxin; motoneurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease.
                    Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of medicament for the treatment of neurological disorder -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             isoform having extracellular (Ec) domain, hence also referred as IGF-I-Ec. The MGF protein comprises amino acid sequences encoded by nucleic acid sequence of IGF-I exons 4, 5 and 6 in the reading frame
                                                                                                                                                                  The present invention relates to use of mechano-growth factor (MGF),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGSTLEEHK 111
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100.0%; Pred. No. 1.6e-51;
ive 0; Mismatches 0;
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                                                                                                                    Claim 4; Page 52; 66pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Oryctolagus cuniculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       111 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200136483-A1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25-MAY-2001.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of MGF.
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AAE02449
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Gaps

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The present invention relates to use of mechano-growth factor (MGF), an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a medicament for the treatment of neurological disorder. The MGF is capable of reducing motoneurone loss by 20% or greater in response to nerve avulsion, and effects motoneurone rescue, preferably adult motoneurone rescue. The MGF polymorlectide and polypeptide are useful in the manufacture of a medicament for the treatment of a neurological disorder, including a disorder of motoneurones and/or neurodegenerative disorder, e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive spinal muscular atrophy, infantile or juvenile muscular atrophy, poliomyelitis or post-pollo syndrome, a disorder caused by exposure to a toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an injury that affects motoneurones, motoneurone loss associated with aging,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                    Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      autosomal or sex-linked muscular dystrophy, diabetic neuropathy, peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The present sequence is rabbit IGF-I isoform MGF. MGF is muscle isoform having extracellular (Ec) domain, hence also referred as IGF-I.Ec. The MGF protein comprises amino acid sequences encoded by nucleic acid sequence of IGF-I exons 4, 5 and 6 in the reading frame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GPETLCGAELVDALQEVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Insulin like growth factor 1; IGF-1; Ec peptide; muscle disorder;
                                                                                                Use of mechano-growth factor, an isoform of Insulin-like Growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGSTLEEHK 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 512; DB 22;
Pred. No. 5.5e-43;
3; Mismatches 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (UNLO ) ROYAL FREE HOSPITAL SCHOOL MED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rabbit insulin like growth factor 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAW23301 standard; Protein; 121 AA
                                                                                                                                                                             Claim 4; Page 54; 66pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  85.5%;
86.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                heart; neuromuscular disease.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 86.5'
Matches 96; Conservative
Goldspink G, Johnson I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Oryctolagus cuniculus.
                                    WPI; 2001-355620/37.
N-PSDB; AAD06400.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               111 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAE02451;
                                                                                                                                                                                                                                                                                                                                            Seguence
                                                                                                                                                                                                                                                                                                                    of MGF.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; IGF-I isoform; Insulin-like Growth Factor-I; MGF; mechan-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; poliomyelitis; post-polio syndrome; toxin; motoneurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease.
                                                                                                                A use of insulin like growth factor I (IGF-1) has been developed, and is characterised by the presence of the Ec peptide, or a functional equivalent, in the treatment or therapy of a human or animal. The IGF-1 polypeptide can be used to treat muscular disorders, e.g. Duchenne or Becker muscular dystrophies and related progressive skeleral muscle weakness and wasting, muscle atrophy in ageing humans, spinal cord injury induced muscle atrophy and neuromuscular diseases, and cardiac disorders, e.g. diseases where promotion of cardiac muscle protein synthesis is a beneficial treatment, cardiomyopathies and acute heart failure or insult, specifically myocarditis or myocardial infarction. It can also be used to promote bone fracture healing and maintenance of bone in old age. The present sequence represents rabbit IGF-1 used in the present specification.
                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                  1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                             peptide - to treat humans or animals, particularly muscle disorders, heart conditions or neuromuscular diseases
                                                                                                                                                                                                                                                                                                                                                                              DB 18; Length 121;
                                                                                                                                                                                                                                                                                                                                                                                                                  CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGSTLEEHK 111
                                                                                                                                                                                                                                                                                                                                                                                                                             Human IGF-I isoform mechano-growth factor (MGF) protein.
                                                                                                                                                                                                                                                                                                                  85.5%; Score 512; DB 18
86.5%; Pred. No. 6e-43;
iive 3; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAE02447 standard; Protein; 110 AA
                                                                                              Disclosure; Fig 3; 33pp; English.
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                                                                                                                                                                                                                                                                                                                                           Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2001-355620/37.
           WPI; 1997-470877/43
                                                                                                                                                                                                                                                                                                                             Best Local Similarity
Matches 96; Conserv
                                                                                                                                                                                                                                                                                            121 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-PSDB; AAD06398
                         N-PSDB; AAT84893
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                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 4
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The present five flowth Factors (1 decream) 91.00. Incomplete of a medicament for the treatment of neurological disorder. The MGF is capable of reducing motoneurone loss by 20% or greater in response to nerve avoision, and effects motoneurone secue, preferably adult motoneurone rescue. The MGF polynucleotide and polypeptide are useful in the rescue. The MGF polynucleotide and polypeptide are useful in the amunicature of a medicament for the treatment of a neurological disorder, including a disorder of medicament for the treatment of a neurological disorder, including a disorder of metoneurones and/or neurological disorder, or 9; amyotrophic lateral sclerosis, spinal muscular atrophy, progressive poliomyelitis or post-polio syndrome, a disorder caused by exposure to a toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an injury that affects motoneurones, motoneurone loss associated with ading, autosomal or sex-linked muscular dystrophy, diabetic neuropathy, ceripheral neuropathies, Alzhaimer's disease and Parkinson's disease. The present sequence is human IGF-I isoform MGF MGF is a muscle isoform having extracellular (EC) domain, hence also referred as incleic acid sequence of IGF-I exons 4, 5 and 6 in the reading frame
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                                                                                                                                                                                                                                     relates to use of mechano-growth factor (MGF), n Factor-I (IGF-I) isoform in the manufacture of a
                                     Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder - \,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GPETLCGAELVDALQEVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
mechano-growth factor, an isoform of Insulin-like Growth
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGSTLEEHK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 494.5; DB 22
pred, No. 2.9e-41;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. 2.96
2; Mismatches
                                                                                                                                                              Claim 4; Page 50-51; 66pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      82.6%;
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Best Local Similarity 85.6
Matches 95; Conservative
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The present invention relates to use of mechano-growth factor (MGF),
an Insular-like Growth Factor-I (IGF-I) isoform in the manufacture of a
medicament for the treatment of neurological disorder. The MGF is capable
of reducing motoneurone loss by 20% or greater in response to nerve
avulsion, and effects motoneurone rescue, preferably adult motoneurone
rescue. The MGF polynucleotide and polypeptide are useful in the
manufacture of amedicament for the treatment of a neurological disorder,
including a disorder of motoneurones and/or neurodegenerative disorder,
including a disorder of motoneurones and/or neurodegenerative disorder,
e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive
spinal muscular atrophy, infantile or juvenile muscular atrophy,
poliomyelitis or post-polio syndrome, a disorder caused by exposure to a
toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an
injury that affects motoneurones, motoneurone loss associated with aging,
autosomal or sex-linked muscular dystrophy, diabetic neuropathy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rat; IGF-I isoform; Insulin-like Growth Factor-I; MGF; mechano-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; poliomyelitis; post-polio syndrome; toxin; motomeurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease; liver; L.IGF-I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Note: The present sequence (SEQ ID NO: 12) is stated as being the same as that shown in figure 9 (AAE02531) of the specification. However
                                                                                                    Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of medicament for the treatment of neurological disorder -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The present sequence is rat liver-type IGF-I isoform (L.IGF-I). The L.IGF-I protein comprises amino acid sequences encoded by nucleic acid sequence of IGF-I exons 4 and 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rat liver-type IGF-I isoform (L.IGF-I) protein, alternative version.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 105;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 471; DB 22;
Pred. No. 5.6e-39;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "Encoded by ACC"
                                                                                                                                                                                              Disclosure; Page 58-59; 66pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAE02531 standard; Protein; 105 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   differs at a single position
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 CVRCKPTKSARSIRAORHTDMPKTOK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ilarity 100.0%; P
Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             78.68;
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Johnson I;
                                   WPI; 2001-355620/37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
les 86; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   105 AA;
                                                              N-PSDB; AAD06404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Misc-difference
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Goldspink G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Seguence
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Matches
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The present invention relates to use of mechano-growth factor (MGF), an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a medicament for the treatment of neurological disorder. The MGF is capable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      including a disorder of motoneurones and/or neurodegenerative disorder, e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive spinal muscular atrophy, infantile or juvanile muscular atrophy, poliomyelitis or post-polio syndrome, a disorder caused by exposure to a toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an injury that affects motoneurones, motoneurone loss associated with aging,
                                                                                                                                                                                                                                                                                                                                                                                                                of reducing motoneurone loss by 20% or greater in response to nerve vaulsion, and effects motoneurone rescue, preferably adult motoneurone rescue. The MGF polynuclectide and polypeptide are useful in the manufacture of a medicament for the treatment of a neurological disorder,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               autosomal or sex-linked muscular dystrophy, diabetic neuropathy, peripheral neuropathies. Alzheimer's disease and Parkinson's disease. The present sequence is alternative version of rat liver-type IGF-I isoform (L.IGF-I). The L.IGF-I protein comprises amino acid sequences of IGF-I exons 4 and 6.

Note: The present sequence is stated as being the same as SEO ID NO: 12 shown in sequence listing (AAE02451) of the specification. However
                                                                                                                                                                                                                                                 Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence of pre-pro-insulin-like growth factor 1B (ppIGF-1B).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 105;
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Pred. No. 5.6e-39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Growth promoter; lactation enhancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAP70277 standard; protein; 195 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    78.6%; Scc...
100.0%; Pre
                                                                                                                                                                                                                                                                                                                         Disclosure; Fig 9; 66pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              it differs at a single position.
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                                                                                      99GB-0026968.
                                                  15-NOV-2000; 2000WO-GB04354
                                                                                                                      (UNEO ) UNIV COLLEGE LONDON
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                                                                                                                                                              Johnson I;
                                                                                                                                                                                                WPI; 2001-355620/37.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
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                                                                                                                                                                                                                   N-PSDB; AAD06404.
                                                                                                                                                            Goldspink G,
                                                                                      15-NOV-1999;
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               25-MAY-2001
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The present invention relates to use of mechano-growth factor (MGF), an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a medicament for the treatment of neurological disorder. The MGF is capable of reducing motoneurone loss by 20% or greater in response to nerve avulsion, and effects motoneurone rescue, preferably adult motoneurone rescue. The MGF Polynucleotide and polypeptide are useful in the manufacture of a medicament for the treatment of a neurological disorder, including a disorder of motoneurones and/or neurodegenerative disorder, eg., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive spinal muscular atrophy, infantile or invenile muscular atrophy, progressive poliomyelitis or post-polio syndrome, a disorder caused by exposure to a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an injury that affects motoneurones, motoneurone loss associated with aging, autosomal or sex-linked muscular dystrophy, diabetic neuropathy, peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The present sequence is human liver-type IGF-I isoform (L.IGF-I). The LIGF-I protein comprises amino acid sequences encoded by nucleic acid sequence of IGF-I exons 4 and 6.
                                                                                                                                                                   Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; long-term memory protein; LTM; insulin-like growth factor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                neuroleptic; anticonvulsant; nootropic; neuroprotective; IGF1; cerebroprotective; drug discovery; therapeutic profiling; learning disability; memory impairment; brain injury; epilepsy; mental retardation; senile dementia; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 423; DB 22;
Pred. No. 2.9e-34;
1; Mismatches 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human insulin-like growth factor, IGF1.
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                                                                                                                                                                                                                                                                     Disclosure; Fig 8; 66pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 CVRCKPTKSARSIRAQRHTDMPKTQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAU09067 standard; Protein; 137
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Local Similarity 90.7%;
nes 78; Conservative 1
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  (UNIO ) UNIV COLLEGE LONDON.
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                                                  Johnson I;
                                                                                               WPI; 2001-355620/37.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 105 AA;
                                                                                                                           N-PSDB; AAD06403
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                                                  Goldspink G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    A 42 base oligonucleotide corresponding to the DNA sequence encoding amino acids 10 to 23 of mature human IGF-I was synthesized (AAN70437). The radiolabeled 42 mer was then employed to screen for IGF-I containing DNA sequences in a human liver cDNA library. Insulin-like growth factors-IA and -IB CDNAS were isolated from a human CDNA library by using lambdagt 11 (AAN70435, AAN70436). The human IGF-I genomic gene was isolated and mapped. It encodes at least two preproinsulin-like growth factor-I proteins. An essentially pure proproinsulin-like growth factor-I protein comprissing the sequence of amino acids shown in Figure six is claimed (AAP70277).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease; liver; L.IGF-I.
                                                                                                                                                                                                                                                                                                               New pre-pro-insulin-like growth factor-1 protein - obtd. by recombinant DNA procedures for use as growth promoters for enhancing lactation, for stimulating cell proliferation etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 195;
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~hes 12; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3; Mismatches
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77.5%; Score 464;
Best Local Similarity 85.3%; Pred. No. 56
Matches 87; Conservative 3; Mismatche
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                                                                                                                                                                                                                                                                                                                                                                                                               Claim 11; Fig 6; 59pp; English.
                                               87EP-0870001
                                                                                                                   86US-0816662
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                                                                                               86US-0929671
                                                                                                                                                                     (UNIW ) UNIV OF WASHINGTON.
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                                                                                                                                                                                                                     Rotwein PS;
                                                                                                                                                                                                                                                                  WPI; 1987-200203/29.
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                                               06-JAN-1987;
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22-JUL-1987
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Length 105; Indels ဖ

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animal comprises treating with an agent that modulates the activity of animal comprises treating with an agent that modulates the activity of one or more of genes from zif268, insulin-like growth factor (IGF).

Comportses treating with an agent that modulates the activity of and neuroendocrine VGF (neurotropin-inducible gene). The method is useful for conducting a drug and/or target discovery business, which comprises conducting a drug and/or target discovery business, which comprises conducting therapeutic profiling of the agents (or their analogues) identified, for efficacy and toxicity in animals, and analogues) identified as having an acceptable therapeutic profile and/or licensing to a third party the rights for further drug development of the identified agents. The method of conducting drug discovery business inturher comprises an additional step of establishing a distribution of system for distributing the preparation for sale and may optionally include establishing a sales group for marketing the preparation. A pharmaceutical composition containing the agent is useful for enhancing memory consolidation in an animal, or for augmenting agent (agonist) or otherwise for enhancing the functional performance of central nervous system neurons, where the agent is a cAMP elevating agent (agonist) preferably a cAMP analogue or CAMP phosphodiesterase inhibitor, which activates adenylate cyclase. The composition is useful for treating diseases associated with learning disabilities, memory impairment e.g. due to toxicant exposure, brain injury, epilepsy, mental retardation in children and semile dementia, including Allahen's disease. The contraction in sulfile relation in sulfile of the preparation in sulfile of the preparation in sulfile and semile dementia, including Allahen's disease. The contraction in children and semile dementia, including Allahen's disease. The
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cancer;
asthma;
                                                                                                                                                                                                                                                                                                                       The invention relates to modulating long term memory consolidation in an
                                                                                                                                                                                 Regulating memory consolidation in an animal comprising treating with an agent that modulates activity of one or more genes from zif268, insulin-like growth factor, glutamate receptor 2, c/\text{EBPb}beta and VGF -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Insulin-like growth factor 1 receptor; IGF-1; synthetic peptide; autophosphorylation; cellular growth; proliferation; restenosis; burn; wound; brain metastasis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 423; DB 22;
Pred. No. 3.8e-34;
1; Mismatches 7;
                                                                                                                                                                                                                                                                            Disclosure; Page 90-91; 100pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAR83803 standard; protein; 153 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
(UYBR-) UNIV BROWN RESEACH FOUND.
                     (HUGH-) HUGHES HOWARD MED INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Insulin-like growth factor 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            70.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15-FEB-1996 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            78; Conservative
                                                                   Bear MF;
                                                                                                           WPI; 2001-626335/72.
N-PSDB; AAS14695.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   137 AA;
                                                                Alberini CM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAR83803;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAR83803
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The amino acid sequence of the insulin-like growth factor I pre-protein. Processing of the protein results in a 70 amino acid mature protein. The mature protein is split into 4 domains: the B domain has strong homology to the B chain of insulin, the A domain similarly has homology to the B chain of insulin, the A domain similarly has homology to the A chain of insulin. These domains are separated by a C domain and the mature protein is terminated by a D domain at the C-terminus. The D domain sequence was used to synthesis peptides (AAR83801-2) that include amino acid residues 60-64 of the mature IGF-1 protein. IGF-1 binds to the IGF-I receptor (IGF-IR) via the D domain and induces activated IGF-IR by autophosphorylation of the IGF-IR.

Activated IGF-IR is associated with callular growth and proliferation. The synthetic peptides are useful as inhibitors of IGF-I binding to IGF-IR and thus may be used in the treatment of disorders characterised by undesirable cell proliferation eg. cancer, restenosis, asthma, burns,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                           New synthetic IGF-1 analogues comprising 5-25 amino acids - useful in treatment of diseases associated with undesirable cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; IGF-1; insulin-like growth factor 1; urinary incontinence;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      70.6%; Score 423; DB 16; Length 153; 90.7%; Pred. No. 4.2e-34; ive 1; Mismatches 7; Indels (
               /label- mature peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Page 20-21; 28pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  109 CAPLKPAKSARSVRAQRHTDMPKTQK 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAW69733 standard; Protein; 153 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
                            49.77

Tabel- B domain
78.89

/label- C domain
/label- A domain
111.118
                                                                                                                                 111..118
/label= D domain
                                                                                                                                                                                                                                                                                                                         (UYJE-) UNIV JEFFĘRSON THOMAS.
                                                                                                                                                                                                                                                        94WO-US14576.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          wounds or brain metastases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best_Local Similarity 90.7
Matches 78; Conservative
                                                                                                                                                                                                                                                                                                                                                           Baserga R, Jameson BA;
                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1995-231515/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        153 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             proliferation
                                                                                                                                                                                      WO9516703-A1.
                                                                                                                                                                                                                                                      15-DEC-1994;
                                                                                                                                                                                                                                                                                        15-DEC-1993;
                                                                                                                                                                                                                      22-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26-0CT-1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAW69733;
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Peptide
                                 Domain
                                                                                                   Domain
                                                                 Domain
                                                                                                                                    Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAW69733
Dp
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DNA can be used in the vector of the invention, for expression of a nucleic acid sequence in a cell, which comprises: (a) a nucleic acid cassette containing a sequence encoding IGF-I; (b) a 5' flanking region including one or more sequences necessary for expression of the nucleic acid cassette, including a promoter from a skeletal alpha-actin gene; (c) a linker connecting the 5' flanking region to a nucleic acid, the linker having a position for inserting the nucleic acid cassette, and lacking the coding sequence of a gene with which it is naturally associated; and (d) a 3' flanking region, including a 3' untranslated region or a 3' non coding region or both, where the 3' flanking region is 3' to the position for inserting the nucleic acid cassette and comprises a sequence from a growth hormone 3' urg. The vector can provide for efficient IGF-I expression, particularly in gene therapy. It can be used for the delivery of IGF-I for treating diseases such as muscle atrophy,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  diabetes, neuropathy, osteoporosis, and growth disorders. They can be used for treating peripheral neuropathies resulting from diabetes, genetic disease such as Type I or Type II diabetes, genetic disease such as Chacot-marie-tooth disease, AIDS, atherogenesis, atherosclerotic, acatiolovascular, or peripheral vascular disease, haemophilia, inflammation and side-effects from anti-cancer and antiviral drugs. The vectors can also be used to create transgenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                            This sequence is the human insulin-like growth factor I (IGF-I).
                                                                                                                                                                                                                        New vector for expression of insulin-like growth factor-I containing a skeletal alpha-actin gene promoter, IGF-I coding sequences and a 3' region from growth hormone 3'-UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Goat Insulin like growth factor 1 (IGF-1) precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 423; DB 19;
Pred. No. 4.2e-34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                animals for research or livestock improvement.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Insulin; growth factor; bone; tumour therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               109 CAPLKPAKSARSVRAQRHTDMPKTQK 134
                                                                                                              Schwartz R;
                                                                                                                                                                                                                                                                                                                 Disclosure; Fig 13; 115pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAR40844 standard; Protein; 154
                                               (BAYU ) BAYLOR COLLEGE MEDICINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     70.68;
96US-0031539
                                                                                                                                                      WPI; 1998-333339/29.
N-PSDB; AAV40793, AAV40794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       03-MAR-1994 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                 (GENE-) GENEMEDICINE INC
                                                                                                              Demayo FJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Ta; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          153 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JP05199878-A.
02-DEC-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Capra hircus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10-AUG-1993.
                                                                                                              Coleman M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Seguence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAR40844;
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AAR40844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δλ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A method has been developed of treating urinary incontinence (UI) in mammals. The method comprises delivering a nucleic acid vector for the expression of a growth factor or neurotrophic factor in a tissue or tissues. The present sequence represents human IGF-1 (insulin-like growth factor 1) which is used in the method of the invention. Due to the growth and stimulatory effects of growth factors and neurotrophic factors, introducing these factors to degenerated muscles in the urinary system can improve UI by enhancing both their integrity and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                Treatment of urinary incontinence - by delivering nucleic acid vector for expression of growth factor or neurotrophic factor in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 423; DB 19;
Pred. No. 4.2e-34;
1; Mismatches 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 12d; Page 108-109; 117pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                109 CAPLKPAKSARSVRAQRHTDMPKTQK 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         86
gene therapy; neurotrophic factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 CVRCKPTKSARSIRAQRHTDMPKTQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAW57882 standard; Protein; 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      70.6%;
                                                                                                                                                                                                                          97us-0036862
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Best Local Similarity 90.73
Matches 78; Conservative
                                                                                                                                                                                                                                                                     (GENE-) GENEMEDICINE INC
                                                                                                                                                                                                                                                                                                                                                         WPI; 1998-437184/37.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human IGF-I protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               neural innervation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            153 AA;
                                                                                                                                                                                                                                                                                                                                                                                 N-PSDB; AAV50425
                                               Homo sapiens
                                                                                       WO9833529-A1
                                                                                                                                                                              04-FEB-1998;
                                                                                                                                                                                                                          04-FEB-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   W09824922-A1
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                                                                                                                                   06-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tissue(s)
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Gaps

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Gaps

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Length 156; Indels

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The present invention relates to use of mechano-growth factor (MGF), an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a medicament for the treatment of neurological disorder. The MGF is capable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rabbit; IGF-I isoform; Insulin-like Growth Factor-I; MGF; mechano-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; poliomyelitis; post-polio syndrome; toxin; motoneurone disorder; poliomyelitis; post-polio syndrome; dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease; liver; L.IGF-I.
A use of insulin like growth factor I (IGF-1) has been developed, and is characterised by the presence of the Ec peptide, or a functional equivalent, in the treatment or therapy of a human or animal. The IGF-1 polypeptide can be used to treat muscular disorders, e.g. Duchenne or Becker muscular dystrophy, autosomal dystrophies and related progressive skeletal muscle weakness and wasting, muscle atrophy in againg humans, spinal cord injury induced muscle atrophy and neuromuscular diseases,
                                                                                                                                                     and cardiac disorders, e.g. diseases where promotion of cardiac muscle protein synthesis is a beneficial treatment, cardiomyopathies and acute heart failure or insult, specifically myocarditis or myocardial infarction. It can also be used to promote bone fracture healing and maintenance of bone in old age. The present sequence represents human IGF-I Ea isoform used in the present specification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rabbit liver-type IGF-I isoform (L.IGF-I) protein.
                                                                                                                                                                                                                                                                                                                                                        Score 423; DB 18;
Pred. No. 4.3e-34;
1; Mismatches 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; Page 60-61; 66pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAE02452 standard; Protein; 105
                                                                                                                                                                                                                                                                                                                                                          70.68;
90.78;
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                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 78; Conserv
                                                                                                                                                                                                                                                                                                               156 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-355620,
N-PSDB; AAD06405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200136483-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-AUG-2001
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                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAE02452;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                        ine goat IGF precursor is useful for the preperation of IGF-1 which is used for growth of bone and the therapy of tumours. The IGF-1 precursor is prepared by inserting the coding sequence into an expression vector, transforming a host cell with the expression vector. culturing the transformed cell and retrieving the IGF-1 precursor from the culture supernatant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Use of insulin like growth factor I characterised by presence of Ecpeptide – to treat humans or animals, particularly muscle disorders, heart conditions or neuromuscular diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Insulin like growth factor 1; IGF-1; Ec peptide; muscle disorder;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 423; DB 14; Length 1.
Pred. No. 4.2e-34;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human insulin like growth factor 1 Ea isoform.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1; Mismatches
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                                                                                                                                                                                                                                                                                      Claim 2; Figure 1; 6pp; Japanese
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                70.68;
90.78;
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  91JP-0347820
                                             91JP-0347820.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       154 AA;
                                                                                        (KOMA/) KOMANO T.
                                                                                                                                                          N-PSDB; AAQ47804
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                                             02-DEC-1991;
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RESULT 14 AAW23302

Matches

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avulsion, and effects motoneurone rescue, preferably adult motoneurone conversion, and effects motoneurone rescue, preferably adult motoneurone construction, and effects motoneurone rescue, preferably adult motoneurone conversions and/or neurological disorder, amoufacture of a medicament for the treatment of a neurological disorder, including a disorder of motoneurones and/or neurodegenerative disorder, e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive spinal muscular atrophy, infantile or juvenile muscular atrophy, progressive convince, motoneurone trauma, a motoneurone lesion or nerve damage, an injury that affects motoneurones, motoneurone loss associated with aging, autosomal or sex-linked muscular dystrophy, diabetic neuropathy, contropathy, also and parkinson's disease.

Controlled acid sequence is rabbit liver-type IGF-I isoform (L.IGF-I).

The LIGF-I protein comprises amino acid sequences encoded by conclete acid sequence of IGF-I exons 4 and 6.

Note: The present sequence (SEQ ID NO: 14) is stated as being the same as that shown in figure 10 (AAE02456) of the specification. However it differs at few positions.
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105 AA; Sequence

; 0 Gaps ; 0 70.1%; Score 420; DB 22; Length 105; 89.5%; Pred. No. 5.7e-34; Live 2; Mismatches 7; Indels Query Match 70.19 Best Local Similarity 89.55 Matches 77; Conservative

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Copyright (c) 1993 - 2002 Compugen Ltd.
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                                                                                                                        Run on:
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Patent No. 5470828
Sequence 2, Appli
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    Sednence Sed
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: METHOD OF TREATING MUSCULAR DISORDERS NUMBER OF SEQUENCES: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 512; DB 4; Length 121;
Pred. No. 1.6e-51;
3; Mismatches 12; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/142,583A
FILING DATE: 29-OCT-1998
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO PCT/GB97/00658
FILING DATE: 11-MAR-1997
APPLICATION NUMBER: GB 9605124.8
FILING DATE: 11-MAR-1996
US-07-989-845-28
US-08-989-844-12
US-08-161-04-12
US-08-240-121-12
US-08-240-121-12
US-08-32-11298-28
US-09-029-267-14
US-08-328-961-8
US-08-328-961-8
US-08-999-251-39
US-09-340-250-39
US-09-340-250-39
US-08-180-572-5
US-08-321-5858-108-39
US-09-347-035-18
US-08-321-5858-128-39
US-08-321-5858-128-39
US-08-321-5858-39
                                                                                                                                                                                                                                                                                                                                                                                 US-07-654-611-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
RADDRESSER: NIXON & VANDERHYE P.C.
STREET: 1100 NORTH GLEBE ROAD
CITY: ARLINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: SADOFF, B. J.
REGISTRATION NUMBER: 36663
REFERENCE/DOCKET NUMBER: 117-263
TELECOMMUNICATION INFORMATION:
TELEPHONE: 7038164000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO: 4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: GOLDSPINK, GEOFFREY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-142-583A-4
; Sequence 4, Application US/09142583A
; Patent No. 6221842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY: USA
ZIP: 22201
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 121 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  85.5%;
86.5%;
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TELEFAX: 7038164100
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 85.5
Best Local Similarity 86.5
Matches 96; Conservative
    STATE: VA
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RESULT 3
US-08-950-720A-9
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11 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     33 GPETLCGAELVDALQFVCGDRGFYFNRPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 92
                                                                                 61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGSTLEEHK 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             70.6%; Score 423; DB 1; Length 137; 90.7%; Pred. No. 2.9e-41; ive 1; Mismatches 7; Indels
                                                                                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: CHEN, Thomas T
APPLICANT: SHAMBLOTT, Michael J
TITLE OF INVENTION: INSULIN-LIKE GROWTH FACTORS ISOLATED
TITLE OF INVENTION: FROM RAINBOW TROUT
NUMBER OF SEQUENCES: 12
CORRESPONDENCE ADDRESS:
ADDRESSE: Burns, Doane, Swecker & Mathis
STREET: George Mason Bldg., Washington & Prince Sts.
CITY: Alexandria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; OTHER INFORMATION: /note= "Gap of 27 after 116."
US-07-953-230A-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
PLICATION NUMBER: US/07/953,230A
FILING DATE: 30-SEP-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note= "Gap of 2 after 7."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "Gap of 1 after 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY AGENT INFORMATION:

NAME: Crane-Feury, Sharon E
REGISTRATION UNBER: 36,113
REFERENCE/DOCKET NUMBER: 029755-010
TELEPHONE: (703) 836-6620
TELEPHONE: (703) 836-5021
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
LENGTH: 137 amino acids
TYPE: amino acid
STRANEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                               STATE: VIEGINIA
COUNTRY: United States
21P: 22313-1404
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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US-07-953-230A-10
; Sequence 10, Application US/07953230A
; Patent No. 5476779
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Matches 78; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCATION: 7
OTHER INFORMATION:
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LOCATION: 116
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13 GPETLCGAELVDALQEVCGDRGFYFNRPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 82
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Patent No. 5473054
GENERAL INFORMATION:
APPLICANT: Bradford A. Jameson and Renato Baserga
TITLE OF INVENTION: IGF-1 Analogs
NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         70.6%; Score 423; DB 3; I
llarity 90.7%; Pred. No. 3.2e-41;
Conservative 1; Mismatches 7;
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Kurtz Mackiewicz & No. 5473054ris
                                                                                                                                                                                                                                                                                                                                                                                                       OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
Sequence 9, Application US/08950720A
Patent No. 6046028
GENERAL INFORMATION:
APPLICANT: Conklin, Darrell C.
APPLICANT: Lofton-Day, Catherine E.
APPLICANT: Lok, Si
APPLICANT: Jaspers, Stephen R.
TILE OF INVENTION: INSULIN HOMOLOG
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/08/950,720A
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                  E: ZymoGenetics, Inc.
1201 Eastlake Avenue East
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 CVRCKPTKSARSIRAQRHTDMPKTQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Sawislak, Deborah A
REGISTRATION NUMBER: 37,438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER: 96
FELECOMMUNICATION INFORMATION:
TELEPHONE: 206-442-6672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE: No. 6046028e
                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
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INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS
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Matches 78; Conserv
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STREET: 1201 Ea
CITY: Seattle
STATE: WA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS:
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ADDRESSEE:
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Gaps
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Sequence 11, Application US/09142583A
Patent No. 6221842
GENERAL INFORMATION:
APPLICANTH: GOLDSFINK, GEOFFREY
TITLE OF INVENTION: METHOD OF TREATING MUSCULAR DISORDERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         70.6%; Score 423; DB 4; Length 156; 90.7%; Pred. No. 3.3e-41; Live 1; Mismatches 7; Indels
                                                                                                                                                                                                                                          70.6%; Score 423; DB 5; Length 153; 90.7%; Pred. No. 3.3e-41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/NS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/142,583A
FILING DATE: 29-Oct-1998
CLASSIFICATION: <UNKNOWN>
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: WO PCT/GB97/00658 FILING DATE: 11-MAR-1997 APPLICATION NUMBER: GB 9605124.8 FILING DATE: 11-MAR-1996
                                                                                                                                                                                                                                                                                    1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: NIXON & VANDERHYE P.C. STREET: 1100 NORTH GLEBE ROAD CITY: ARLINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          117 - 263
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MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 11:
US-09-142-583A-11
                     TJU-0649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: SADOFF, B. J.
REGISTRATION NUMBER: 36663
REFERENCE/DOCKET NUMBER: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                   109 CAPLKPAKSARSVRAQRHTDMPKTQK 134
                                                                                                                                                                                                                                                                                                                                                                                                           61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELECOMMUNICATION INFORMATION: TELEPHONE: 7038164000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION:
33,229
                   REFERENCE/DOCKET NUMBER: TJ
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMUN.C. TELEPHONE: 7038164100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO: 11:
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                                                         TELEPHONE: (215) 568-3100
TELEPAX: (215) 568-3439
INFORMATION FOR SEQ ID No: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                    78; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY: USA
ZIP: 22201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
'-hag 78; Conserve
                                                                                                                                                           ; TYPE: AMINO ACID
; TOPOLOGY: linear
PCT-US93-04329-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE: VA
                                                                                                                                                                                                                                                                 Sest Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-142-583A-11
                                                                                                                                                                                                                                              Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 70.6%; Score 423; DB 1; Length 153; Best Local Similarity 90.7%; Pred. No. 3.3e-41; Matches 78; Conservative 1; Mismatches 7; Indels
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ZIP: 19103
ZUP: 19103
COMPUTER READABLE FORM:
MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
COMPUTER: IBM PS/2
OPERATING SYSTEM: PC-DOS
SOFTWARE: WORDPERFECT 5.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US93/04329
FILING DATE: 19930507
                                                                                                                         DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Bradford A. Jameson and Renato Baserga
TITLE OF INVENTION: 1GF-1 Analogs
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE: Woodcock Washburn
ADDRESSEE: Kurtz Mackiewicz & Norris
STREET: One Liberty Place - 46th Floor
CITY: Philadelphia
: One Liberty Place - 46th Floor Philadelphia
                                                                                                                                                                            SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/219,878A
FILING DATE: 30-MAR-1994
CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                 NAME: Mark DeLuca
REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TJU-1240
TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3439
INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/881,524
FILING DATE: 08-WAY-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         109 CAPLKPAKSARSVRAQRHTDMPKTQK 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 5
PCT-US93-04329-1
Equence 1, Application PC/TUS9304329
GENERAL INFORMATION:
                                                                                                                                                                 PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
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APPLICATION NUMBER: 07/881,524
FILING DATE: 08-MAY-92,
ATTORNEY, AGENT INFORMATION:
NAME: MARK DELUCA
                                                                                                                                        IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
                                                                            ZIP: 19103
COMPUTER READABLE FORM:
MEDIUM TYPE: DISKETTI
                                                                                                                                        COMPUTER: IBM PC OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; TOPOLOGY: linear
US-08-219-878A-1
                                                             USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PA
                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STATE:
                                        STATE:
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Length 191;

Indels

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86 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 145
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Tekamp-Olson, Patricia
TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
TITLE OF INVENTION: PROTEINS IN YEAST
NUMBER OF SEQUENCES: 41
CORRESPONDENCE ADDRESS:
ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP
STREET: 3605 Glenwood Ave. Suite 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                             68.9%; Score 412.5; DB 3;
89.7%; Pred. No. 6.7e-40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           68.9%; Score 412.5; DB 3 ilarity 89.7%; Pred. No. 6.7e-40; Conservative 1; Mismatches 7
                                                                                                                                                                                 Pred. No. 6.76
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                US/09/340,250
                                                                                                                                                                                                                                                                                                                          61 CVRCKPTKSA-RSIRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 CVRCKPTKSA-RSIRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 41, Application US/09340250 Patent No. 6083723 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA: APPLICATION NUMBER: 08/989,251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Spruill, W. Murray
REGISTRATION NUMBER: 32,943
REFERENCE/DOCKET NUMBER: 576
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919 420 2202
41:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: ATTORNEY/AGENT INFORMATION:
                                          191 amino acids
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                                                                                                                                                                                 Best Local Similarity 89.7
Matches 78; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: 919 881 3175
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
INFORMATION FOR SEQ ID NO:
                     SEQUENCE CHARACTERISTICS
                                                                                               ; MOLECULE TYPE: protein US-08-989-251-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ELECOMMAC.
TELEPHONE: 919 881 3
                                                                                  linear
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Matches 78; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Raleigh
                                                           TYPE: amino
TOPOLOGY: li
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STATE: NC
COUNTRY: US
ZIP: 27622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
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CITY: Ra
                                        LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH:
                                                                                                                                                              Query Match
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                                          52 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDHRRLEMY 74
                   1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     69.4%; Score 416; DB 6; Length 119; 89.5%; Pred. No. 1.5e-40; ive 1; Mismatches 8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 41, Application US/08989251
Patent No. 6017731
GENERAL INCRNATION:
APPLICANT: Tetamp-olson, Patricia
TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGGUS
TITLE OF INVENTION: PROTEINS IN YEAST
NUMBER OF SEQUENCES:
ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3: Bell Seltzer IP Group of Alston & Bird, LLP 3605 Glenwood Ave. Suite 310
                                                                                                                                                                                                                                        ;Patent No. 5405942
; aPPLICANT: BELL, GRAEME I.;RALL, LESLIE B.;MERRYWEATHER,
                                                                                                                                                                                                                                                                              JAMES P. TITLE OF INVENTION: PREPRO INSULIN-LIKE GROWTH FACTORS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/989,251
                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/65,673
FILING DATE: 16-JUN-1987
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 630,557
FILING DATE: 19-JUL-1984
                                                                                                                    112 CAPLKPAKSARSVRAQRHTDMPKTQK 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
NAME: Spruill, W. Murray
REGISTRATION NUMBER: 32,943
REFERENCE/DOCKET NUMBER: 5784-
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919 420 2202
TELEPHONE: 919 881 3175
                                                                                               61 CVRCKPTKSARSIRAQRHTDMPKTQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             77; Conservative
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COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                    I AND II
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity
Matches 77; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Raleigh
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 119
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-989-251-41
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STATE: N
COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET:
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Length 191;

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ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth
STREET: Suite 4700
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; MOLECULE TYPE: peptide US-08-460-890A-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Suite 4700
                                                          CITY: Los Angeles
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Los Angeles
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              amino acid
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Best Local Similarity
Matches 67; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRANDEDNESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 12
US-08-167-641C-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             68.9%; Score 412.5; DB 4; Length 191; 89.7%; Pred. No. 6.7e-40; live 1; Mismatches 7; Indels 1.
                                                                                                                                                    GENERAL INFORMATION:

APPLICANT: Tekamp-olson, Patricia
TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
TITLE OF INVENTION: PROTEINS IN YEAST
NUMBER OF SEQUENCES: 41
CORRESPONDENCE ADDRESS:
ADDRESSEE: 8ell Sellser IP Group of Alston & Bird, LLP
STREET: 3605 Glenwood Ave. Suite 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 47, Application US/08460890A
Patent No. 5994109
GENERAL INFORMATION:
APPLICANT: Woo, Savio L.C.
APPLICANT: Month, Louis C.
APPLICANT: Gristiano, Richard J.
APPLICANT: Gottchalk, Stephen
TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS AND
TITLE OF INVENTION: METHODS OF USE
NUMBER OF SEQUENCES: 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/528,108 FILING DATE:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                       CITY: Raleigh
STATE: NC
COUNTY: US
ZIP: 276.2
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
  PRIOR APPLICATION DATA:

APPLICATION DATA:

APPLICATION DATA:

FILING DATE:

ATORNEY AGENT INFORMATION:

NAME: SPINIL, W. MITRAY

REGISTRATION NUMBER: 32,943

REFERENCE/DOCKET NUMBER: 5784-4

TELECOMMUNICATION INFORMATION:

TELEPHONE: 919 420 2202

TELEPHONE: 919 881 3175

INFORMATION FOR SEQ ID NO: 41:

SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 CVRCKPTKSA-RSIRAQRHTDMPKTQK 86
                                                                                                                  Sequence 41, Application US/09528108 Patent No. 6312923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPE: amino acid
TOPOLOGY: 11-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           dery Match
Best Local Similarity 89.7%,
Best Local Similarity 78,
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: protein 09-528-108-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-460-890A-47
                                                                                            US-09-528-108-41
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.; 0 APPLICATION NUMBER:

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4 TLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMYCVR 63
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: Woo, Savio L.C.
APPLICANT: Smith, Louis C.
APPLICANT: Cristiano, Richard J.
APPLICANT: Cristiano, Richard J.
APPLICANT: Gottchalk, Stephen
TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS AND
TITLE OF INVENTION: METHODS OF USE
NUMBER OF SEQUENCES: 65
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 367; DB 4;
Pred. No. 3.9e-35;
3; Mismatches 7
                                                          PRICEASTICATION: 439
PRICEASTICATION DATA:
APPLICATION NUMBER: 08/167,641
FILING DATE: December 14, 1993
APPLICATION NUMBER: 07/855,389
FILING DATE: MATCH 20, 1992
APPLICATION NUMBER: PCT/US93/02725
FILING DATE: MATCH 19, 1993
ATONNEY/AGENT INFORMATION:
NAME: WATCHTON NUMBER: 32,327
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 212/063
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
US/08/460,971A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08/462,040 FILING DATE: June 5, 1995 CLASSIFICATION: 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM COMPATIBLE OPERATING SYSTEM: IBM P.C. DOS 5.( SOFTWARE: FastSEQ for Windows 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: Lyon & Lyon STREET: STREET: Suite 4700 CITY: Los Angeles STATE: California COUNTRY: U.S. A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 47, Application US/08462040 Patent No. 6177554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               08/167,641
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                                                                                                                                                                                                                                                                                                                                             TELEPHONE: (213) 489-1600
TELERAX: (213) 955-0440
TELEX: 67-3510
INPORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
LENGTH: 78 amino acids
TYPE: amino acid
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61.3%;
87.0%;
                   FILING DATE: June 5, 1995
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 87.09
Matches 67; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64 CKPTKSARSIRAQRHTD 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; TOPOLOGY: linear; MOLECULE TYPE: peptide US-08-460-971A-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZIP: 90071-2066
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US-08-462-040-47
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Pred. No. 3.9e-35;
3; Mismatches 7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: Woo, Savio L.C.
APPLICANT: Smith, Louis C.
APPLICANT: Smith, Louis C.
APPLICANT: Cristiano, Richard J.
APPLICANT: Gottchalk, Stephen
TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS AND
TITLE OF INVENTION: METHODS OF USE
NUMBER OF SEQUENCES: 65
CORRESPONDENCE ADDRESS:
            COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: Storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: FASTSEQ for Windows 2.0
CURRENT APPLICATION DATA:
                                                                                                                                                                         APPLICATION NUMBER: US/08/167,641C
FILING DATE: December 14, 1993
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/855,389
FILING DATE: March 20, 1993
APPLICATION NUMBER: PCT/US3/02725
FILING DATE: March 19, 1993
ATTONNEY,AGENT INFORMATION:
NAME: WarDurg, Richard J.
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 205/012
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION FOR SEQ ID NO: 47:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY: CALL CALL COUNTRY: U.S.A. ZIP: 90071-2066
COMPUTER READABLE FORM:
MEDIUM TYPE: SLORAGE
MEDIUM TYPE: Storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OPERATING SYSTEM: IBM P.C. DOS 5.0 SOFTWARE: FASLSEQ for Windows 2.0 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 13
US-08-460-971A-47
: Sequence 47, Application US/08460971A
; Patent No. 6150168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
STREET: Suite 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61.3%;
87.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 78 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 61.37
Best Local Similarity 87.07
Matches 67; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear
MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: Los Angeles
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-167-641C-47
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 TLGGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAP 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:

APPLICANT: CHEN, Thomas T
APPLICANT: SHAMBLOTT, MICHAEL J
TITLE OF INVENTION: INSULIN-LIKE GROWTH FACTORS ISOLATED
TITLE OF INVENTION: FROM RAINBOW TROUT
NUMBER OF SEQUENCES: 12
CORRESPONDENCE ADDRESS:
ADDRESSEE: Burns, Doane, Swecker & Mathis
STREET: George Mason Bldg., Washington & Prince Sts.
CITY: Alexandria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 61.3%; Score 367; DB 4; Length 78
Best Local Similarity 87.0%; Pred. No. 3.9e-35;
Matches 67; Conservative 3; Mismatches 7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/953,230A
FILING DATE: 30-SEP-1992
CLASSIFICATION: 435
ATTORNEY/AGBNT INFORMATION:
NAME: Crane-Feury, Sharon E
REGISTRATION NUMBER: 36,113
REFERENCE/DOCKET NUMBER: 028755-010
TELEPHONE: (703) 836-620
TELEPHONE: (703) 836-621
INFORMATION FOR SEQ ID NO: 9:
APPLICATION NUMBER: 07/855,389
FILING DATE: March 20, 1992
APPLICATION NUMBER: PCT/0S93/02725
FILING DATE: March 19, 1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 9, Application US/07953230A
Patent No. 5476779
                                                                                                            NAME: Warburg, Richard J.
REGISTRATION NUMBER: 32,327
RELECOMMUNCATION INFORMATION:
TELEPHONE: (213) 489-1600
TELEX: (213) 955-0440
TELEX: (7-3510
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 176 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 22313-1404
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STATE: Virginia
COUNTRY: United States
ZIP: 22313-1404
                                                                                                                                                                                                                                                                                                                       LENGTH: 78 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                64 CKPTKSARSIRAQRHTD 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: linear
MOLECULE TYPE: peptide
-08-462-040-47
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US-07-953-230A-9
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October 25, 2002, 15:55:02 ; Search time 12.7048 Seconds (without alignments) 839.517 Million cell updates/sec
GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                          OM protein - protein search, using sw model
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US-09-852-261-4 599 1 GPETLCGAELVDALQFVCGP.....THKKRKLQRRRKGSTLEEHK 111 Title: Perfect score:

Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 rched:

Scoring table:

283138 seqs, 96089334 residues

Total number of hits satisfying chosen parameters:

283138

Minimum DB seq length: 0 Maximum DB seq length: 2000000000.

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

PIR_71:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Descr	insulin-like growt	
SUMMARIES		
	AA408010 AA208010 BA409104 BA409108 BA409108 BA50804 BA50804 BA50804 BA50808 BA508 BA50808 BA5	
DB		
% Query Match Length	183 183 183 187 187 187 187 188 188 188 188 188 188	
% Query Match	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	
Score	536 5464 464 464 464 464 473 423 423 423 423 423 423 423 42	
	110 8 4 8 9 0 0 1111111111111111111111111111111	

insulin-like growt	insulin-like growt insulin - shorthor
S04858 T108978 A38612 B60738 IGHU2 S02442 S155671 IS7671 IG7610 IGRT2 S15484 IS1240 A60740	A34049 INFIS
0000000000000000	7 7
179 189 188 188 188 188 188 188 79 79	44 50
86888888888888888888888888888888888888	26.5 25.5
232 224 223 222 219.5 216 215 211.5 209.5 204 184.5	152.5
@ @ @ @ @ @ @ @ @ @ @ @ @ @ @ @ @ @ @	44 45

ALIGNMENTS

RESULT 1 A40912 insulin-like growth factor I precursor form 1 - rat C;Species: Rattus norvegicus (Norway rat) C;Species: Rattus na 40912 R;Roberts Jr., C.T.; Lasky, S.R.; Lowe Jr., W.L.; Seaman, W.T.; LeRoith, D. Mol. Endocrinol. 1, 243-248, 1987 A;Title: Molecular cloning of rat insulin-like growth factor I complementary deoxyrib c tissues. A;Reference number: A40912; MUID:88288198 A;Reference number: A40912 A;Status: preliminary A;Molecule type: mRNA A;Residues: 1-133 CROB> A;Cross-references: GB:MI5480; NID:g204749; PIDN:AAA41385.1; PID:g204750 C;Superfamily: insulin	Query Match Best Local Similarity 99.1%; Pred. No. 7.2e-53; Bact Local Similarity 99.1%; Pred. No. 7.2e-53; Matches 110; Conservative 0; Mismatches 1; Indels 0; Gaps 0; Qy 1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60 [RESULT 2 A26859 insulin-like growth factor IB precursor - rat C; Species: Rattus norvegicus (Norway rat) C; Date: 19-Nov-1988 #sequence_revision 19-Nov-1988 #text_change 16-Jul-1999 C; Date: 19-Nov-1988 #sequence_revision 19-Nov-1988 #text_change 16-Jul-1999 C; Accession: A26859 R; Shimatsu, A.; Rotwaln, P. Nucleic Acids Res. 15, 7196, 1987 A; Title: Sequence of two rat insulin-like growth factor I mRNAs differing within the A; Recession: A26859, MUID:88015572 A; Accession: A26859	A) Molecule type: mRNA A) Residues: 1-159 < SH1> A) Residues: 1-159 < SH1> A) Cross-references: GB:X06107; GB:M32260; GB:Y00429; NID:g56424; PIDN:CAA29480.1; PID C; Superfamily: insulin C; Superfamily: insulin C; Reywords: alternative splicing; growth factor Query Match Best Local Similarity 96.4%; Pred. No. 1.1e-50; Matches 107; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
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us-09-852-261-4.rpr

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Afacession: A01611
A;Molecule type: DNA
A;Molecule type: MUD: 86094355
A;Molecule type: MRNA
A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: mRNA
A; Residues: 1-195 <SANA
A; Cross-references: EMBL:X56774; NID:g32991; PIDN:CAA40093.1; PID:g32992
A; Cross-references: EMBL:X56774; NID:g32991; PIDN:CAA40093.1; PID:g32992
R; Sandberg-Nordqvist, A.C.; Stahlbom, P.A.; Reinecke, M.; Collins, V.P.; von Holst, H
Cancer Res. 53, 2475-2478; 1993
A; Tille: Characterization of insulin-like growth factor 1 in human primary brain tumo
A; Reference number: A48960; MUID:93265440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Species: Homo sapiens;(Man)
C;Date: 30-Jun-1987 #sequence_revision 30-Jun-1987 #text_change 31-Dec-2000
C;Date: 30-Jun-1987 #sequence_revision 30-Jun-1987 #text_change 31-Dec-2000
C;Accession: A01611; A26181; S30540; B89560; A42664
R;Rotwein, P.; Pollock, K.M.; Didder, D.K.; Krivi, G.G.
J;Bol. (Chem. 201, 4828-4832, 1986
A;Title: Organization and sequence of the human insulin-like growth factor I gene. A;Reference number: A92581; MUID:86168194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     All Thomas. All the splicing; amidated carboxyl end; growth factor; plasma C. Superfamily: insulin C. Keywords: alternative splicing; amidated carboxyl end; growth factor; plasma F;1-21/Domain: signal sequence #status predicted <SIG>F;2-48/Domain: insulin-like growth factor I #status predicted <MAT>F;49-118/Product: insulin chain B-like #status predicted <CHB>F;49-110/Domain: insulin chain A-like #status predicted <CHB>F;90-110/Domain: insulin chain A-like #status predicted <CHA>F;111-118/Domain: Deptide #status predicted <CHA>F;111-118/Domain: arboxyl-terminal propeptide (E peptide) #status predicted <CHE>F;111-119-195/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CHE>F;151-172/Product: insulin-like growth factor IB-El amide #status predicted <MA2>
                                                                                                                                                                                                                                                                                                                                                                 splice form B [validated] - human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Cross-references: GB:M11568; NID:g183111; PIDN:AAA52539.1; PID:g183112 R; Sandberg Nordqvist, A.C.; Stahlbom, P.A.; Lake, M.; Sara, V.R. submitted to the EMBL Data Library, November 1990 A; Description: Nucleotide sequence of the human fetal brain IGF-1b. A; Reference number: S30540
    23 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Reference number: A42664; MUID:92390398
A;Contents: annotation; IBE-1; amidated carboxyl end
C;Comment: For an alternative splice form, see PIR:IGHU1.
                                                                                                                                                                                                                                                                                                                                                                 insulin-like growth factor I precursor, splice form
N;Alternate names: IGF-IB; somatomedin C
N;Contains: insulin-like growth factor IB-El amide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Cross-references: GDB:120081; OMIM:147440
                                                                                                                        A; Map position: 12922-12924.1
A; Introns: 21/3; 74/1; 134/3
C; Superfamily: inc.'':
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C;Genetics:
A;Gene: GDB:IGF1
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A;Title: Molecular cloning of rat insulin-like growth factor I complementary deoxyribonu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Species: Rattus norvegicus (Norway rat)
C;Date: 09-Jun-1988 #sequence_revision 09-Jun-1988 #text_change 16-Jul-1999
C;Accession: A27804; 165202
R;Shimatsu, A.; Rotwein, P
J Biol. Chem. 262, 7894-790, 1987
A;Title: Mosaic evolution of the insulin-like growth factors. Organization, sequence, A;Reference number: A27804; MUID:87222423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cross-references: GB:M15650; GB:J02743; NID:g204296; PIDN:AAA41214.1; PID:g204299
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C.Date: 28-Feb-1992 #sequence_revision 28-Feb-1992 #text_change 16-Jul-1999
C.Accession: B40912
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C;Superfamily: insulin
C;Keywords: alternative splicing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: GB:M15481; NID:g204753; PIDN:AAA41387.1; PID:g204754 C;Superfamily: insulin
                                         49 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
    GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
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A;Title: Rat IGF.T cDNA's contain multiple 5'-untranslated regions. A;Reference number: 152218; MUID:8729853
A;Accession: 165202
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-27 <RES.
                                                                                                                                                                                                       109 CAPLKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGSTLEEHK 159
                                                                                                                                                             CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGSTLEEHK 111
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Pred. No. 6.5e-40;
0; Mismatches 1; Indels
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94.3%;
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Best Local Similarity
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Residues: 1-181 <SHI>
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A; Residues: 1-127 <ROB>
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A; Status: preliminary
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Gaps

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4; Indels

DB 2; Length 153

us-09-852-261-4.rpr

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A; Molecule type: mRNA
A; Residues: 1-127 <BELD
A; Residues: 1-127 <BELD
A; Residues: 1-127 <BELD
A; Residues: 1-127 <BELD
B; Value ces: GB: Value ces: CB: 
Endocrinology 122, 22-27, 1988
A;Title: Isolation and characterization of insulin-like growth factor I (somatomedin-A;Title: Isolation and characterization of insulin-like growth factor I (somatomedin-A;Reference number: A61096; MUID:88082445
A;Accession: A61096
A;Molecule type: protein
A;Residues: 49-53, 73, 75-65 <CAN>
C;Superfamily: insulin
C;Keywords: alternative splicing; growth factor
F;49-118/Product: insulin-like growth factor I #status experimental <ILG>
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C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Date: 30-Jun-1988 #text_change 16-Jul-1999
C;Accession: A25540; 155295; 159090; B25540
R;Bell, G.I.; Stompien, M.M.; Pong, N.M.; Rall, L.B.
Nucleic Acids Res. 14, 7873-7882, 1986
A;Title: Sequences of liver cDNAs encoding two different mouse insulin-like A;Reference number: A93643; MUID:87040760
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Pred. No. 1e-37;
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95.3%;
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94.2%;
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Best Local Similarity 95.3%
Matches 82, Conservative
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Best Local Similarity 94.29
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A. Molecule type: DNA
A. Cross-references: GB: M15651; GB: J02743; NID: g204297; PIDN: AAA41215.1; PID: g204300
B; Casella, S.J.; Smith, E.P.; Van Wyk, J.J.; Joseph, D.R.; Hynes, M.A.; Hoyt, E.C.; Lund
BNA 6, 325-330, 11897
A. Title: Isolation of rat testis cDNAs encoding an insulin-like growth factor I precursc
A; Reference number: A27849; MUID: 88003970
A; Accession: A27849
A; Molecule type: mRNA
A; Residues: 27-153 < CAS>
A
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A, Residues: 46-153 < MURN
A, Title: Evidence of introduction by molecular cloning of artificial inverted sequence a A, Reference number: JN0088; MUID:91136779
A, Accession: JN0088
A, MOID:9136779
A, Residues: MSAPP, 22-153 < KA2>
A, Experimental source: liver
A, Residues: MSAPP, A: 22-153 < KA2>
A, Experimental source: liver
A, Rote: the authors present evidence that this mRNA may contain an artifactual inversion R: Tamura, K.; Kobayashi, M.; Ishli, Y.; Tamura, T.; Hashimoto, K.; Nakamura, S.; Niwa, M.; Biol. Chem. 264, 5516-5521, 1989
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A;Accession: A32857
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C;Date: 16-Mar-1989 #sequence_revision 16-Mar-1989 #text_change 21-Jul-2000

C;Accession: B27804; A27849; JH0133; A28504; JN0088; A32857; A61096

R;Shimatsu, A.; Rotwein, P.

J. Biol. Chem. 262, 7894-7900, 1987

A;Title: Mosaic evolution of the insulin-like growth factors. Organization, sequence,

A;Reference number: A27804; MUID:87222233
     F;54-96,66-109,95-100/Disulfide bonds: #status predicted F;172/Modified site: amidated carboxyl end (Arg) (amide in mature form from following
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0
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                                                                                                                                                                           Query Match
77.5%; Score 464; DB 1; Length 19:
Best Local Similarity 85.3%; Pred. No. 9.5e-40;
Matches 87; Conservative 3; Mismatches 12; Indels
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posidues: 27-153 <ARA>
Cross-references: GB:D00698; NID:g220780; PIDN:BAA00604.1;
Tross-references: GB:D00698; NID:g220780; PIDN:BAA00604.1;
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A;Fitle: Identification, characterization, and regulation A;Reference number: A28504; MUID:87246437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     109 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRRK 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRR 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         llin-like growth factor IA precursor - rat
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Species: Rattus norvegicus (Norway rat)
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A;Residues: 49-118 <TAM>
R;Canalis, E.; McCarthy, T.; Centrella,
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A; Molecule type: DNA
A; Residues: 49-108 <RES>
A; Residues: 49-108 <RES>
A; Residues: 49-108 <RES>
A; Redidues: 49-108 <RES>
A; References: GB:M28139; NID:g341835; PIDN:AAA74553.1; PID:g550489
B; Mathews, L.S.; Norstedt, G.; Palmiter, R.D.
Proc. Natl. Acad. Sci. U.S.A. 83, 9343-9347, 1986
A; Title: Regulation of insulin-like growth factor I gene expression by growth hormone A; Reference number: 159090; MUID:87092249
A; Accession: 159090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Gener: 19f1
C; Superfamily: insulin
C; Superfamily: insulin
C; Superfamily: splicing; growth factor
C; Superfamily: signal sequence #status predicted <SIG>
F; 23-127/Domain: signal sequence #status predicted <COB>
F; 23-127/Domain: insulin-like growth factor IA (active) #status predicted <NAT>
F; 23-51/Domain: insulin cohin B-like #status predicted <COB>
F; 64-84/Domain: insulin chain A-like #status predicted <COB>
F; 64-84/Domain: insulin chain A-like #status predicted <COB>
F; 85-92/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>
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A;Residues: 49-108 <RE2>
A;Cross-references: GB:M14983; NID:g194495; PIDN:AAA37925.1; PID:g194496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; DB 2; Length 127
1.7e-37;
A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                    A;Status: preliminary; translated from GB/EMBL/DDBJ
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Pred. No. 1
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A; Molecule type: DNA
A; Residues: 1-153 <ROT>
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A; Molecule type: mRNA
A; Residues: 1-153 <STE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Residues: 1-153 <LEB>
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F.1-32/Domain: signal sequence #status predicted <SIG>
F.3-102/Product: insulin-like growth factor I #status predicted <MAT>
F.33-61/Domain: insulin chain B-like #status predicted <CHB>
F.52-73/Domain: insulin connecting C peptide-like #status predicted <CHC>
F.74-94/Domain: insulin chain A-like #status predicted <CHC>
F.95-102/Domain: Deptide #status predicted <CHA>
F.95-102/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CHE>
F.103-137/Domain: carboxyl-terminal propeptide (E peptide) #status predicted
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Jaces Storession: A3552
R; Tobin, G.; Yee, D.; Bruenner, N.; Rotwein, P.
Mol. Endocrinol. 4, 1914-1920, 1990
A; Title: A novel human insulin-like growth factor I messenger RNA is express A; Reference number: A36552; MUID:91187000
                                                                                                                                                                                                                                                      C;Species: Cavia porcellus (guinea pig)
C;Date: 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change 07-Nov-1997
C;Accession: S12719
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1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
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A;Residues: 1-137 <BEL>
A;Resicues: 1-137 <BEL>
A;Cross-references: EMBL:X52951
Note: it is uncertain whether Met-1 or Met-8 is the initiator Superfamily: insulin
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                                                                                                                                                                                                                                                                                                                       R;Bell, G.I.; Stemplen, M.M.; Fong, N.M.; Seino, S. Nucleic Acids Res. 18, 4275, 1990
A;Title: Sequence of a cDNA encoding guinea pig IGF-I. A;Reference number: S12719; WUID:90332447
A;Reference number: S12719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 423; DB 2; I
Pred. No. 9.9e-36;
1; Mismatches 7;
                                                                                                                                                                                                                                   - guinea pig
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                                                                                           CAPLKPTKAARSIRAQRHTDMPKTQK 108
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                                                                                                                                                                                                                              insulin-like growth factor I precursor
                                                                 61 CVRCKPTKSARSIRAQRHTDMPKTQK
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90.7%;
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Matches 78; Conservative
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A; Residues: 1-137 <TOB>
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tes 78; Conserv
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Matches
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A;Cross-references: GB:M27544; NID:g184829; PIDN:AAA52787.1; PID:g306927
R;Rinderknecht, E.; Humbel, R.E.
J. Biol. Chem. 253, 2769-2776, 1978
A;Title: The amino acid sequence of human insulin-like growth factor I and its struct A;Reference number: A92226; MuID:78130171
A;Accession: A92226
A;Accession: A92226
A;Accession: A92226
A;Accession: A92226
A;Reference number: Broad A;Reference number: A60483; MuID:89323462
A;Accession: A60483
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A; Residues: 24-153 - GDE>
A; Cross-references: GB:X03420; GB:X00362; NID:g33020; PIDN:CAA27152.1; PID:g33021; GB
A; Jansen, M.; van Schaik, F.M.A.; Ricker, A.T.; Bullock, B.; Woods, D.E.; Gabbay, K.H
Nature: 306, 609-611, 1983
A; Title: Sequence of CDNA encoding human insulin-like growth factor I precursor.
A; Reference number: A93321; MUID:84068210
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insulin-like growth factor I precursor, splice form A [validated] - human N.Alternate names: IGF-I long splice form precursor; IGF-IA; somatomedin C C; Species: Homo sapiens (man) C; Date: 24-Apr-1984 #sequence_revision 30-Jun-1987 #text_change 31-Dec-2000 C; Accession: A92581; A23614; A93321; JT0571; A23622; A92226; A60483; S30519; A48960; R; Rotwein, P.; Pollock, K.M.; Didler, D.K.; Krivi, G.G. Biol. Chem. 261, 4828-4832, 1986 A; Title: Organization and sequence of the human insulin-like growth factor I gene. A A; Reference number: A92581; MUID:86168194
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A; Residues: 1-153 - CAN>
A; Cross-references: GB:X00173; NID:g33015; PIDN:CAA24998.1; PID:g33016
A; Note: Met-24 is proposed as a likely initiator
R; Steenbergh, P.H.; Koonen-Reemst, A.M.C.B.; Cleutjens, C.B.J.M.; Sussenbach, J.S.
Biochem. Biophys. Res. Commun. 175, 507-514, 1991
A; Title: Complète nucleotide sequence of the high molecular weight human IGF-I mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: GB:M14156; NID:g183107; PIDN:AAA52538.1; PID:g183110
R;de Pagter-HOlthuizen, P.; van Schaik, F.M.A.; Verduijn, G.M.; van Ommen, G.J.B.;
R;de Pagter-HOlthuizen, P.; van Schaik, F.M.A.; Verduijn, G.M.; van Ommen, G.J.B.;
A;Title: Organization of the human genes for insulin-like growth factors I and II.
A;Reference number: A91356; MUID:86108862
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A; Residues: 49-53, X',55-65, X',67-75 <KAR>
A; Experimental source: platelet lysake, M.; Sara, V.R.
Stordquist Sandberg, A.C.; Stahlbom, P.A.; Lake, M.; Sara, V.R.
Submitted to the EMBL Data Library, November 1990
A; Rescription: Nucleotide sequence of the human fetal brain IGF-la.
A; Reference number: $30519
A; Accession: $30519
A; Status: preliminary
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A; Title: Nucleotide sequence of the bovine insulin-like growth factor 1 (IGF-1) and A; Reference number: S12672; MUID:90175014
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C;Keywords: growth factor
F;20-89/Product: insulin-like growth factor Ia (fragment) #status predicted
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C:Date: 31-Mar-1988 #sequence_revision 28-Apr-1995 #text_change 18-Jun-1999
C:Accession: $12672; A25623; $00465
R:Fotsis, T.; Murphy, C.; Gannon, F.
Nucleic Acids Res. 18, 676, 1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     insulin-like growth factor Ia precursor - dog (fragment)
C;Species: Canis lupus familiaris (dog)
C;Date: 10-Mar-1994 #sequence_revision 10-Mar-1994 #text_change 07-May-1999
                                                                                                                                                                                                                                                                                                                                                                                              50 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 79
                                                                                                                                                                                                                                                                                                                                              1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
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A;Residues: 49-118 <HON>
R;Francis, G.L.; Upton, F.M.; Ballard, F.J.; McNeil, K.A.; Wallace, J.C.
                   F;50-119/Product: insulin-like growth factor-I #status predicted <MAT>F;120-154/Region: E domain
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A;Residues: 1-153 <FOT>
A;Cross-references: EMBL:X15726; NID:9454; PIDN:CAA33746.1; PID:9455
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R; Delafontaine, P.; Lou, H.; Harrison, D.G.; Bernstein, K.E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              insulin-like growth factor IA precursor - bovine (fragment)
                                                                                                                                                    Score 423; DB 2; I
Pred. No. 1.1e-35;
1; Mismatches 7;
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Pred. No. 2.8e-35;
; Mismatches 8;
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J. Blol. Chem. 261, 569-575, 1986
A.Title: Insulin-like growth factors I and
A,Reference number: A92585; MUID:86085881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          encoding dog MUID:93366192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAPLKPAKSARSVRAORHTDMPKAOK 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
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                                                                                                                                                        70.68;
90.78;
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89.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A) Title: Sequence of a cDNA A) Reference number: PN0622; A) Accession: PN0622
                                                                                                             Query Match
Best Local Similarity
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Best Local Similarity
Matches 77; Conser
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A; Molecule type: mRNA
A; Residues: 1-153 < NRD: 932989; PIDN: CAA40092.1; PID: 932990
A; Cross-references: EMBL: X56773; NID: 932989; PIDN: CAA40092.1; PID: 932990
B; Sandberg-Nordgvist, A.C.; Stahlbom, P.A.; Reinecke, M.; Collins, V.P.; von Holst, H.;
Cancer Res. 53, 2475-2478, 1993
A; Title: Characterization of insulin-like growth factor 1 in human primary brain tumors. A; Reference number: A48960; MUID: 93265440
A; Accession: A48960
A; Cross-references: GB: X56773; GB: S61841; NID: 932989
A; Cross-references: anaplastic oilgodendroglioma
A; Note: sequence extracted from NCBI backbone (NCBIN:133056, NCBIP:133057)
A; Note: sequence inconsistent with the nucleotide translation
B; Rall, L.B.; Scott, J; Bell, G.T.
Meth. Enzymol. 1466, 239-248, 1987
A; Title: Human insulin-like growth factor I and II messenger RNA: isolation of complement effects reform NCBI.
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A Molecule type: mRNA

C Comment: The insulin-like growth factors, isolated from plasma, are structurally and for comment: For an alternative splice form, see PIR:IGHUIB.

C Genetics:

A Gene: GDB:IGF1

A Molecule type: mRN:147440

A Molecule to Manuali the manuali of 
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Pred. No. 1.1e-35;
1; Mismatches 7; Indels
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90.7%;
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multiple cell types,

insulin-like growth

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Gaps

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in fetal and adult bovine serum. Purifi

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Gaps 9

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Score 418; DB 2; L Pred. No. 3.5e-35; 1; Mismatches 8;

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Aintrons: 21/3; 74/1.
C;Superfamily: insulin
C;Keywords: growth factor
F;1-22/Domain: signal sequence #status predicted <SIG>
F;23-48/Domain: propeptide #status predicted <PRO>
F;23-48/Domain: propeptide #status predicted <PRO>
F;49-153/Product: insulin-like growth factor IA #status experimental <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
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Job time : 12.7048 secs
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Local Similarity 89.5%;
nes 77; Conservative
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Matches 76; Conserv
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Best Local 3
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Biochem. J. 251, 95-103, 1988

A;Title: Insulin-like growth factors 1 and 2 in bovine colostrum. Sequences and biologic A;Reference number: $00465; MUD:88268820
A;Accession: $00465
A;Accession: $00465
A;Accession: $00465
A;Accession: $00465
A;Molecule type: protein
A;Restidues: 49-118 <FRA>
A;Restidues: 40-118 <FRA>
A;Restidues:
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C; Species: Sus scrofa domestica (domestic pig)
C; Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 16-Jul-1999
C; Accession: S12825; S21488; A34938; A60738
R; Mueller, M.; Brem, G.
Nucleic Acids Res. 18, 364, 1990
A; Title: Nucleotide sequence of porcine insulin-like growth factor I: 5' untranslated re
A; Reference number: S12825; MUID:90221822
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A; Molecule type: mRNA
A; Residues: Y', 21-153
A; Residues: Y', 21-153
A; Cross-references: GB:M31175
B; Francis, G.L.; Owens, P.C.; McNeil, K.A.; Wallace, J.C.; Ballard, F.J.
A; Cross-references: GB:M3175
A; Fitle: Purification, amino acid sequences and assay cross-reactivities of porcine insu A; Reference number: A60738; MUID:90039035
A; Accession: A60738
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A.Residues: 1-153 <MUE>
A.Cross-references: EMBL:X52388
A.Cross-references: EMBL:X52388
B.Molckson, M.C.; Huskisson, N.S.; Gilmour, R.S.
Description: Porcine Insulin-like growth factor gene: sequence of exon and 5' reference number: S21488
A.Accession: S21488
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Pred. No. 3.5e-35;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R; Tavakkol, A.; Simmen, F.A.; Simmen, R.C.M. Mol. Endocrinol. 2, 674-681, 1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Reference number: A34938; MUID: 89096956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     69.8%;
89.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 89.5
Matches 77; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: protein
A; Residues: 49-117,'X' <FRA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: DNA
A; Residues: 1-21 <DIC>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             109
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Jaculin-like growth factor I precursor, splice form 2 - sheep (Species: Ovis orientals aries, Ovis ammon aries (domestic sheep)
C.Species: Ovis orientals aries, Ovis ammon aries (domestic sheep)
C.Species: Ovis orientals aries, Ovis ammon aries (domestic sheep)
C.Species: Ovis orientals aries, Ovis ammon aries (domestic sheep)
C.Species: Ovis orientals aries, Ovis ammon aries (domestic sheep)
C.Species: Ovis orientals aries, Ovis orientals aries, Ovis orientals aries, Ovis orientals, Ovis 
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
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88.4%; Pred. No. 2.1e-34;
ive 1; Mismatches 9;
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GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd.
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OM protein - protein search, using sw model

October 25, 2002, 15:52:51; Search time 6.68675 Seconds (without alignments) 642.745 Million cell updates/sec Run on:

Title: Perfect score: Sequence:

US-09-852-261-4 599 1 GPETLCGAELVDALQFVCGP......THKKRKLQRRRKGSTLEEHK 111

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

Total number of hits satisfying chosen parameters: 105224 seqs, 38719550 residues rched:

105224

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt_40:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	S mus	_	Q95222 oryctolagus	•		P05017 mus musculu	cavia	s omod s	, capra	canis	P16545 sus scrofa	P07455 bos taurus	P10763 ovis aries	coturni	gallus g	xenobns				P17085 oncorhynchu	Q02815 oncorhynchu	P51458 equus cabal	Q02816 oncorhynchu	P07456 bos taurus	P10764 ovis aries	P51459 equus cabal			P41694 mustela vis	P01344 homo sapien	Q08279 cavia porce	35 mus mu	
SUMMARIES	ID	표	IGFB_RAT	IGF1_RABIT	IGFB_HUMAN	IGFA_RAT	IGFA_MOUSE	IGF1_CAVPO	IGFA_HUMAN	IGF1_CAPHI	IGF1_CANFA	IGF1_PIG	IGF1_BOVIN	IGF1_SHEEP	IGF1_COTJA		IGF1_XENLA	IGF1_SUNMU	IGFA_CYPCA	IGFB_CYPCA	IGF1_ONCKI	IGF1_ONCMY	IGF1_HORSE	IGF2_ONCMY	IGF2_BOVIN	IGF2_SHEEP	IGF2_HORSE	IGF_MYXGL	IGF2_PIG	IGF2_MUSVI	IGF2_HUMAN	IGF2_CAVPO	IGF2_MOUSE	IGF2_RAT
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	Query Match Length	-	181	143	195	153	127	130	153	154	122	153	154	154	124	153	153	81	161	161	176	176	122	214	155	179	181	139	181	129	180	128	180	180
di	Query	6	σ.	'n.	7	4	73.5	0	。	。		8.69	8.69	68.4	64.1		'n.	61.6	60.4	0	60.3	6	6	i.	8	8	7.	7	37.1	۲.	36.9	•	'n	35.0
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P33717 gallus gall	P01335 gadus calla P09536 hydrolagus P01337 batrachoidi	P01338 batrachoidi P12708 zaocys dhum	P12703 alligator m P07454 anser anser	P01334 crotalus at P01327 chinchilla	P31887 trachemys s
IGF2_CHICK INS_MYOSC	INS_GADCA INS_HYDCO INS1_BATSP	INS2_BATSP INS_ZAODH	INS_ALLMI INS_ANSAN	INS_CROAT	INS_TRASC
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50	51 51	50 51	51	51 51	51
33.9	25.3 25.0 24.8	24.5 24.4	24.2	23.9	23.7
203	151.5 150 148.5	147 146	145 143	143	142
35	36 37 38	39 40	41	44	45

ALIGNMENTS

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Matches 100;
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DOMAIN
DOMAIN
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IGF1_RABIT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MUCH HIGHER GROWTH-PROMOTING ACTIVITY.

-!- SUBSCELLULAR LOCATION: Secreted.
-!- ALTERNATIVE PRODUCTS: 2 ISOFORMS; ISOFORM IGF-IA (AC P08025) AND ISOFORM IGF-IB (SHOWN HERE); ARE PRODUCED BY ALTERNATIVE SPLICING.
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                    Gaps
                                                                                                          1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRUEMY 60
                                                                                                                                                                                                                                                                                                                                       Eukaryota; Métazoa; Chórdata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                 23 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE-89174609; PubMed-2538424; Tamura K., Kobayashi M., Tshii Y., Tamura K., Kobayashi M., Tshii Y., Tamura T., Hashimoto K., Nakamura S., Niwa M., Zapf J.;
Primary structure of rat insulin-like growth factor-I and its biological activities ";
J. Biol. Chem. 264:5616-5621(1989).

ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDIINE-89127259; PubMed*3221878; Roberts C.T., Lasky S.R., Lowe W.L., Seaman W.T., Leroith D.; "Structure of the rat insulin-like growth factor II transcriptional
                                                                                                                                                                                                                                                                                                                                                                                                             Shimatsu A., Rotwein P.; "Mosaic evolution of the insulin-like growth factors. Organization, sequence, and expression of the rat insulin-like growth factor I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    unit: heterogeneous transcripts are generated from two promoters by use of multiple polyadenylation sites and differential ribonucleic acid splicing.":
Mol. Endocrinol. 2:1115-1126(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Shimatsu A., Rotwein P.; "Sequence of two rat insulin-like growth factor I mRNAs differing
                                                                                                                      01-FEB-1991 (Rel. 17, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin).
                                                                                   ö
                                                                                                                                                                      CAPLKPTKAARSIRAQRHTDMPKTQKSPSLSTNKKTKLQRRKKGSTFEEHK 133
                                                                                                                                                         CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGSTLEEHK 111
                                                           Length 133;
                                                          Score 537; DB 1; Length 13
Pred. No. 8.7e-52;
2; Mismatches 8; Indels
 f SIMILARITY.

SIMILARITY.

SIMILARITY.

B8E5C05B8BD62502 CRC64;
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                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  within the 5' untranslated region."; Nucleic Acids Res. 15:7196-7196(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene.";
J. Biol. Chem. 262:7894-7900(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
MEDLINE=88015572; Pubmed=3658684;
                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE-87222423; PubMed-3034909;
  BY
BY
BY
70 B'
83 B'
74 B'
14915 MW;
                                                                                                                                                                                                                                                                   01-AUG-1988 (Rel. 08, Created)
                                                           89.6%;
91.0%;
                                                                                   Conservative
                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                               IGF1 OR IGF-1.
Rattus norvegicus (Rat)
28
40
69
133 AA;
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                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=10116;
                                                                                  Matches 101;
DISULFID
                                                                                                                                                                                                                                           IGFB_RAT
P08024;
                       DISULFID
                                    SEQUENCE
                                                           Query Match
                                                                     Best Local
                                                                                                                                                                                 83
                                                                                                                                                                                                                                IGFB_RAT
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modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  49 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Oryctolagus cuniculus (Rabbit).

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Butheria; Lagomorpha; Leporidae; Oryctolagus.

NCBI_TaxID=9986;
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0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  095222; 018846; 01-NOV-1997 (Rel. 35, Created) 16-OCT-2001 (Rel. 40, Last sequence update) 16-OCT-2001 (Rel. 40, Last annotation update) 11sulin-like growth factor I precursor (IGF-I) (Somatomedin). IGFI OR IGF-I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 181;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INSULIN-LIKE GROWTH FACTOR IB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Flekna G., Brem G., Mueller M.;
Submitted (NOV-1996) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGST 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    143 AA
                                                                                                                                                                                                                                                                                                                                              InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                      PRINTS; PRO0276; INSGLINA.
PRINTS; PRO0277; INSGLINB.
ProDom; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM0078; IlGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. (ISOFORM IGF-IA).
                                                                                                                                                                    EMBL, MIS648; AAA41214.1; JOINED. EMBL; MIS649; AAA41214.1; JOINED. EMBL; X06107; CAA29480.1; ALT_SEQ. EMBL; MIS480; AAA41385.1; ALT_SEQ. PIR; A27804; A27804. PIR; A28557; A38557. HSSP; PO5019; IGF1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                    M15647; AAA41214.1; JOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE; PS00262; INSULIN; 1.
                                                                                                                              EMBL; M15650; AAA41214.1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           [7]
STRUCTURE BY NMR.
MEDLINE-91242464; Pubmed-2036417;
COOKE R.M., Harvey T.S., Campbell I.D.;
Cooke R.M., Harvey T.S., Campbell I.D.;
"Solution structure of human insulin-like growth factor 1: a nuclear "Solution structure of human insulin-like growth factor 1: a nuclear "Solution structure and restrained molecular dynamics study.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDILINE-89207850; PubMed=3242681;
Raschdorf F., Dahinden R., Maerki W., Richter W.J., Merryweather J.P.
"Location of disulphide bonds in human insulin-like growth factors of disulphide bonds in human insulin-like growth factors spiomed. Environ. Mass Spectrom. 16:3-8(1988).
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASWA, ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A MICH HIGHER GROWTH-PROMOTING ACTIVITY.
-!- SUBCELLULAR LOCATION: Secreted.
-!- ALTERNATIVE PRODUCTS: TWO FORMS OF IGF-1, IGF-IA AND IGF-IB ARE PRODUCED BY ALTERNATIVE SPLICING.
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sato A., Nishimura S., Ohkubo T., Kyogoku Y., Koyama S., Kobayashi Yasuda T., Kobayashi Y.;
"IH-NMR assignment and secondary structure of human insulin-like growth factor-I (IGF-I) in solution.";
J. Blochem. 111:529-536(1992).
                                                                                                                                                                                                                                                                                     MEDLINE-86108862; PubMed-3002851; de Paqter-Holthuizen P., van Schaltk F.M.A., Verduijn G.M., van Ommen G.J.B., Boume B. Van Ommen G.J.B., Boume genes for insulin-like growth factors I "Organization of the human genes for insulin-like growth factors I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-78130171; PubMed-632300;
Rinderknecht E., Humbel R.E.;
"The amino acid sequence of human insulin-like growth factor I and
    gene. Alternative RNA processing produces two insulin-like growth
                                                                                                                                             Rotwein P.;
"Two insulin-like growth factor I messenger RNAs are expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE-84295593; PubMed-6382022;
Dull-T.J., Gray A., Hayflick J.S., Ullrich A.;
"Insulin-like growth factor II precursor gene organization in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE-83210259; PubMed-6189745;
Blundell T.L., Bedarkar S., Humbel R.E.;
"Tertlary structures, receptor binding, and antigenicity
insulinilke growth factors.";
                                                                                                                                                                                                                  Proc. Natl. Acad. Sci. U.S.A. 83:77-81(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        its structural homology with proinsulin."; J. Biol. Chem. 253:2769-2776(1978).
                           factor I precursor peptides.";
J. Biol. Chem. 261:4828-4832(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       relation to insulin gene family.";
Nature 310:777-781(1984).
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                                                                                                                         MEDLINE-86094355; PubMed-3455760;
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                                                                                                                                                                                                                                                                                                                                                                                                            FEBS Lett. 195:179-184(1986)
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                      -:- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
-:- SUBCELLULAR LOCATION: Secreted.
-:- ATTERNATIVE PRODUCTS: 2 ISOFORMS; IGF-IA AND IGF-IB (SHOWN HERE);
ARE PRODUCED BY ALTERNATIVE SPLICING.
-:- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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Rotwein P., Pollock K.M., Didier D.K., Krivi G.G.;
"Organization and sequence of the human insulin-like growth factor I
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINA.
PROMODON, PR001048; Insulin_IGF_relaxin; 1.
PR0078; INGULIN; 1.
PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Signal; Alternative splicing.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
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13.AuG-1987 (Rel. 05, Last sequence update)
115-DEC-1998 (Rel. 37, Last annotation update)
11sublin-like growth factor IB precursor (IGF-IB) (Somatomedin C)
IGFI OR IBPI
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Pred. No. 5e-49;
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INSULIN-LIKE GROWTH FACTOR I.
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Submitted (SEP-1997) to the EMBL/GenBank/DDBJ databases.
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86.5%;
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HSSP; P05019; 1GF1.
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Casalla S.J., Smith E.P., van Wyk J.J., Joseph D.R., Hynes M.A., Hoyt E.C., Lund P.K.; "Isolation of rat testis cDNAs encoding an insulin-like growth factor
                                                                                                                    Eukaryota; Métazoa; Chórdata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                        Shimatsu A., Rotwein P.; "Mosaic evolution of the insulin-like growth factors. Organization, sequence, and expression of the rat insulin-like growth factor I
                                                                           Insulin-like growth factor IA precursor (IGF-IA) (Somatomedin).
                                                                                                                                                                                                                                                                  Biol. Chem. 262:7894-7900(1987).
                                                                                                                                                                                            MEDLINE-87222423; "PubMed-3034909;
                                                                                                                                                                                                                                                                                                            TISSUE=Testis;
MEDLINE=88003970; PubMed=3652906;
                              01-AUG-1988 (Rel. 08, Created)
01-FEB-1991 (Rel. 17, Last sequ
30-MAY-2000 (Rel. 39, Last anno
                                                                                                         Rattus norvegicus (Rat).
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DNA 6:325-330(1987).
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                                                                                                                                                  NCBI_TaxID=10116;
                                                                                          IGF1 OR IGF-1
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      modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INSULIN-LIKE GROWTH FACTOR IB
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Pred. No. 1.2e-43;
                              an email to license@isb-sib.ch).
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                                                                                                                  AAA52539.1; -. CAA27250.1; ALT_SEQ. CAA27152.1; -.
                                                       EMBL; M14155; AAA52537.1; --
EMBL; M12659; AAA52537.1; JOINED.
EMBL; M14153; AAA52537.1; JOINED.
EMBL; M14154; AAA52537.1; JOINED.
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PDB; 2GF1; 15-APR-93.
PDB; 3GF1; 15-APR-93.
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PIR; A26181; A26181.
PIR; S30540; S30540.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              J. BIOL. Chem. 204:5616-5621(1989).

-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA, ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A MUCH HIGHER GROWTH-PROMOTING ACTIVITY.

-!- SUBCELLULAR LOCATION: Secreted.
-!- ALTERNATIVE PRODUCTS: 2 ISOFORMS; ISOFORM IGF-IA (SHOWN HERE) AND ISOFORM IGF-IB (AC POBO34); ARE PRODUCED BY ALTERNATIVE SPLICING.
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                MEDLINE-89127259; PubMed-3221878; Reaman W.T., Leroith D.; Roberts C.T., Lasky S.R., Lowe W.L., Seaman W.T., Leroith D.; Roberts C.T., Lasky S.R., Lowe W.L., Structure of the rat insulin-like growth factor II transcriptional unit: heterogeneous transcripts are generated from two promoters by use of multiple polyadenylation sites and differential ribonucleic acid splicing.";
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SEQUENCE FROM N.A.
MEDLINE-91103966; Pubmed-1368571;
Kato H., Okoshi A., Miura Y., Noguchi T.;
"A new CDNA clone relating to larger molecular species of rat insulin-like growth factor-I mRNA.";
Agric. Blol. Chem. 54:1599-1601(1990).
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Matches

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49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108

61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRR 102

RESULT 5 IGFA_RAT

1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60

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FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT
                   MUCH HIGHER GROWTH-PROMOTING ACTIVITY
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                                                                                                                                                                                                        PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
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MEDLINE-87040760; PubMed-3774549;
Bell G.I., Stempien M.M., Fong N.M., Rall L.B.;
"Sequences of liver cDNAs encoding two different mouse insulin-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13-AUG-1987 (Rel. 05, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Insulin-like growth factor IA precursor (IGF-IA) (Somatomedin).
IGF1 OR IGF-1.
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                                                                                                                                                                                                                                                                                                                                                    Length 153;
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APL -> VRC (IN REF. 4).
966F3C0FA4EB3DE7 CRC64;
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Pred. No. 1.8e-41;
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PR00277; INSULINB.
PD001048; Insulin_IGF_relaxin; 1.
                                                                                                                                                    InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
                                                                                                                                                                                                                                                                                         PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                growth factor I precursors.";
Nucleic Acids Res. 14:7873-7882(1986).
                                           109 CAPLKPTKSARSIRAQRHTDMPKTQK 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                            61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                       A.
D.
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13-AUG-1987 (Rel. 05, Last seq
                                                                                                                                                                                                                                                                                                                           112 P
17079 MW;
                           CAA29436.1; -.
                                                                                                                                                                                                                                                                                                                                                      74.0%;
                                                                                                                                                                                                                                                                                                                                                              95.38;
                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 95.3
Matches 82; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                SMART; SM00078; IlGF; 1.
                                                                                                PIR; JH0133, JH0133.
PIR; B27804; B27804.
PIR; A32857; A32857.
PIR; A28504; A28504.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                    153 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=10090;
                                                   M15648;
M15649;
                                                                               M17335;
                                                                                        M15481;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IGFA_MOUSE
P05017;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mammalia;
                                                                                                                                                                                                                                                                                                          DISULFID
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                                                                                                                                                                                                                                                                                                                                    SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23 GPETLCGAELVDALQEVCGPRGFYFNRPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cavia porcellus (Guinea pig).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia, Eutheria, Rodentia, Hystricognathi, Caviidae, Cavia.
SUBCELLULAR LOCATION: Secreted.
ALTERNATIVE PRODUCTS: 2 ISOFORMS; ISOFORM IGF-IA (SHOWN HERE)
AND ISOFORM IGF-IB (AC P05018); ARE PRODUCED BY ALTERNATIVE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-AUG-1990 (Rel. 15, Created)
01-AUG-1990 (Rel. 15, Last sequence update)
01-FBB-1994 (Rel. 28, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INSULIN-LIKE GROWTH FACTOR IA.
                                                                        SPLICING.
SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
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1054B8CAC72DC2D7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bell G.I., Stempien M.M., Fong N.M., Scino S.; "Sequence of a cDNA encoding guinea pig IGF-I.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 440; DB 1;
Pred. No. 3.1e-41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIMILARITY.
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                                                                                                                                                                                                                                                                                                                                                                                                  HSSP, POSO19; 1GF1.
MGD; MGI: 196432; 1gf1.
InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam: PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
PRODOM; PD001048; Insulin_IGF_relaxin; 1.
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D.
E PEPTIDE.
BY SIMILAR
BY SIMILAR
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MEDLINE=90332447; PubMed=2377480;
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14120 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match 73.5%;
Local Similarity 94.2%;
tes 81; Conservative
                                                                                                                                                                                                                                                                                                                                                 EMBL; X04480; CAA28168.1; -.
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                                                                                                                                                                                                                                                                                                                                                                           A25540; A25540.
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P17647;
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SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                      rissue=Liver;
                                                                                                                                                                                                                                                                                                          mRNA.
                                                     precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                [6]
  between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  85
        FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA, ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE-86168194; PubMed-2937782;
Rotwein P., Pollock K.M., Didler D.K., Krivi G.G.;
Rotwein P., Pollock K.M. Didler D.K., Krivi G.G.;
"Organization and sequence of the human insulin-like growth factor gene. Alternative RNA processing produces two insulin-like growth factor I precursor peptides.";
J. Biol. Chem. 261:4828-4832(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                        26 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21-JUL-1986 (Rel. 01, Created)
13-ANG-1987 (Rel. 05, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
Insulin-like growth factor IA precursor (IGF-IA) (Somatomedin C).
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                                                                                                                                                                                                                                                                                                                                                                                                      Length 130;
                                                   SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                    INSULIN-LIKE GROWTH FACTOR I.
                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                  251B20AEDC5729FF CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. 2.3e-39;
1; Mismatches 7;
                                                                                                                                                                                                                                                                                                                                                                                                      DB 1;
                                                                                                                                                                                                          PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINA.
PRODOM; PR001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Signal.
SIGNAL
                                                                                                                                                                                                                                                                                                                                                  SIMILARITY.
SIMILARITY.
SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                153 AA
                              MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
                                                                                                                                                                                      Interpro; IPR000739; Insulin_IGF_relaxin. Pfam; PF00049; Insulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                      Score 423;
                                                                                                                                                                                                                                                                                                                                         PEPTIDE
 Nucleic Acids Res. 18:4275-4275(1990)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUBCELLULAR LOCATION: Secreted.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                  14342 MW;
                                                                                                                                                      EMBL; X52951; CAA37127.1; -. PIR; S12719; IGGP1.
HSSP; P05019; 1GF1.
                                                                                                                                                                                                                                                                                                                                                                                                      70.68;
                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity 90.7
nes 78; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                130 AA;
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P01343;
                                                                                                                                                                                                                                                                                                                                                    DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
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PROPEP
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Sato A., Nishimura S., Ohkubo T., Kyogoku Y., Koyama S., Kobayashi M., Yasuda T., Kobayashi Y., "IH-NMR assignment and secondary structure of human insulin-like
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sandberg Nordqvist A.C., Stahlbom P.A., Lake M., Sara V.R., "Characterization of two CDNAs encoding insulin-like growth factor (IGF-1) in the human fetal brain.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   de Pagter-Holthuizen P., van Schaik F.M.A., Verduijn G.M., van Ommen G.J.B., Bouma B.N., Jansen M., Sussenbach J.S.;
"Organization of the human genes for insulin-like growth factors I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-78130171; PubMed-632300; Rinderknecht E., Humbel R.E.; Frinderknecht E., Humbel R.E.; Humbel R.E.; The amino acid sequence of human insulin-like growth factor I and its structural homology with proinsulin."; J. Biol. Chem. 253:2769-2776(1978).
                                      D.E.,
                                                                                                                                                                                                                                                                                                   "Complete characterization of the human IGF-I nucleotide sequence isolated from a newly constructed adult liver cDNA library."; FBSS Lett. 196:108-112(1986).
MEDIINE=84068210; PubMed=6358902;
Jansen M., van Schaik F.M.A., Ricker A.T., Bullock B., Woods D.E.,
Gabbay K.H., Nussbaum A.L., Sussenbach J.S., van den Brande J.L.;
"Sequence of CDNA encoding human insulin-like growth factor I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'Complete nucleotide sequence of the high molecular weight human
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Dull T.J., Gray A., Hayflick J.S., Ullrich A.;
Insulin-like growth factor II precursor gene organization in relation to insulin gene family.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Steenbergh P.H., Koonen-Reemst A.M.C.B., Cleutjens C.B.J.M.,
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Blundell T.L., Bedarkar S., Humbel R.E.;
"Tertiary structures, receptor binding, and antigenicity insulinike growth factors.";
Fed. Proc. 42:2592-2597(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Biochem. Biophys. Res. Commun. 175:507-514(1991).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EBS Lett. 195:179-184(1986).
                                                                                                                                                                                      Nature 306:609-611(1983).
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                                           Raschdorf F., Dahinden R., Meerki W., Richter W.J., Merryweather J.P.;
"Location of disulphide bonds in human insulin-like growth factors
"Location of disulphide bonds in human insulin-like growth factors
(IGFs) synthesized by recombinant DNA technology.";
Biomed. Environ. Mass Spectrom. 16:3-8 (1988).
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
MUCH HIGHER GROWTH PROWOTING ACTIVITY.
-!- SUBCELLULAR LOCATION: Secreted.
-!- SUBCELLULAR LOCATION: Secreted.
-!- ALTERNATIVE PRODUCTS: TWO FORMS OF IGF-1, IGF-IA AND IGF-IB ARE
PRODUCED BY ALTERNATIVE SPLICING.
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INSULIN-LIKE GROWTH FACTOR IA.
                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF00049; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00275; INSULINA.
PRINTS; PR00277; INSULINA.
PRODOM; PD001048; Insulin_IGF_relaxin; 1.
PROSTE; PS00262; INSULIN; 1.
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growth factor-I (IGF-I) in solution.";
J. Biochem. 111:529-536(1992).
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DISULFIDE BONDS.
MEDLINE-89207850; PubMed=3242681;
                                                                                                                                                                                                                                                                                                                 CAA27153.1;
CAA27154.1;
CAA40342.1;
CAA40092.1;
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A23614; A23614.
A23622; A23622.
S30519; S30519.
                                                                                                                                                                                                                                                                                                                                                                                            1GF1; 15-OCT-94
2GF1; 15-APR-93
3GF1; 15-APR-93
                                                                                                                                                                                                                                                                                                                                     X57025;
X56773;
                                                                                                                                                                                                                                                                                                                   X03421;
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MIM; 265850;
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                                                                                                                                                                                                                                                                                                      1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN=SHIBA; TISSUE-Liver;
MEDLINE-95290780; PubMed-7772848;
Mikawa S., Yoshikawa G.-I., Yamano Y., Sakai H., Komano T., Hosoi Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Capra hircus (Goat).

Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Caprine; Capra.

NCBI_TaxID-9925;
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16-0CT-2001 (Rel. 40, Last sequence update)
16-0CT-2001 (Rel. 40, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
                                                                                                                                                                                                        Length 153;
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                                                                                                                                                                                    Score 423; DB 1; Length 13:
Pred. No. 2.8e-39;
Pred. no. 2.8e-39; Tindels
                                                                                                                                                               17026 MW; C6ECD92DCA9B37BC CRC64;
                                                                                                                                                                                         70.6%; Scor.
90.7%; Pred. No. 2...
1; Mismatches
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Pfam; PF00049; Insulin; 1.
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EMBL; D26117; BAA05113.1; -.
EMBL; D26118; BAA05114.1; -.
EMBL; D26119; BAA05115.1; -.
EMBL; D1378; BAA01976.1; -.
HSSP; P05019; 1GF1.
                                                                                                                                                                                                                                                                                                                                                                                                                       109 CAPLKPAKSARSVRAQRHTDMPKTQK 134
                                                                                                                                                                                                                                                                                                                                                                                                  61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
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PRINTS; PR00277; INSULINB.
ProDom; PD001048; Insulin_
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Matches 78; Conservative
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P51457;
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                                                                                                                                                               SEQUENCE
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IGF1_CAPHI
ID IGF1_CA
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DISULFID
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                                                                                                                                                                                          0;
                                                                                                                                                                                                                        50 GPETLCGAELVDALQEVCGDRGFYENKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 109
                                                                                                                                                                                          Gaps
                                                                                                                                                                                                             1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-93366192; PubMed=8359700;
Delafontaine P., Lou H., Harrison D.G., Bernstein K.E.;
"Sequence of a cDNA encoding dog insulin-like growth factor I.";
Gene 130:305-306(1993)
--- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARR STROUTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
                                                                                                                                                                                                                                                                                                                                                                                                             Canis familiaris (Dog).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia, Eutheria, Carnivora, Fissipedia, Canidae, Canis.
                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                01-FEB-1994 (Rel. 28, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
                                                                                                                                                                     Length 154;
                                          BY SIMILARITY.
INSULIN-LIKE GROWTH FACTOR I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                             Score 423; DB 1; Leuge...
Pred. No. 2.8e-39;
Trans 7; Indels
                                                                                                                                                07238B6AF3068422 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Probon; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Signal.
NON_TER
                    Growth factor; Plasma; Signal.
                                                                                                                SIMILARITY.
SIMILARITY.
SIMILARITY.
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Pfam; PF00049; Insulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  or send an email to license@isb-sib.ch)
                                                                                                        E PEPTIDE.
                                                                                                                                                                                                                                                                 61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
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PIR; PN0622; PN0622.
HSSP; P05019; 1GF1.
                                                                                                                BY
SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor.
                                                                                                                                                17082 MW;
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90.7%;
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les 78; Conserv
                                                                                                                                               154 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-89096956; PubMed-3211153;
Tavakkol A., Simmen F.A., Simmen R.C.M.;
Tavakcol a., Simmen F.A., Simmen R.C.M.;
"Porcine insulin-like growth factor-I (pIGF-I): complementary
deoxyribonucleic acid cloning and uterine expression of messenger
ribonucleic acid encoding evolutionarily conserved IGF-I peptides.";
Mol. Endocrinol. 2:674-681(1988).
                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
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HAVE A
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Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
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Mueller M., Brem G.;
"Nucleotide sequence of porcine insulin-like growth factor. 1:5'
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01-AUG-1990 (Rel. 15, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    expression of alternate transcription sites.";
J. Mol. Endocrinol. 11:201-211(1993).
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT
                                                                                                                                                                                                                                                                                                                                           Length 122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MUCH HIGHER OWNER.
-!- SUBCELLULAR LOCATION: Secreted.
-!- SIMPLERITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                        INSULIN-LIKE GROWTH FACTOR I.
                                                                                                                                                                                                                                                                                                                                                                                                    Indels
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BY SIMILARITY.

BY SIMILARITY.

036A004DC44E7D75 CRC64;
                                                                                                                                                                                                                                                                                        Score 418; DB 1; Leny No. 7.6e-39; B; J
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Nucleic Acids Res. 18:364-364(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    153 AA
   SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                            Pred. No. 7.66
1; Mismatches
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E PEPTIDE.
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13407 MW;
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89.5%;
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Best Local Similarity 89.5
Matches 77; Conservative
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IGF1_SHEEP
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ID IGF1 8
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entities requires a license agreement (See http://www.isb-sib.ch/announce/
or send an email to license@isb-sib.ch).
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SEQUENCE OF 50-119 FROM N.A.
MEDLINE-95172127, Pubmed-7867698;
Schmidt A., Einspanier R., Amselgruber W., Sinowatz F., Schams D.;
"Expression of insulin-like growth factor 1 (IGF-1) in the bovine oviduct during the oestrous cycle.";
Exp. Clin. Endocrinol. 102:364-369(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
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P07455;
01-APR-1988 (Rel. 07, Created)
01-NV-1991 (Rel. 20, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 153;
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Pred. No. 9.7e-39;
1; Mismatches 8;
                                                                                                                                                                                                 InterPro: IPR000739; Insulin_IGF_relaxin.
Pfam; PR00049; Insulin; 1.
PRINTS; PR00275; INSULINA.
PRODOM; PD001048; INSULINA.
PRODOM; SM00078; INSULINA.
SMART; SM00078; INSULINA.
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EMBL; X52388; CAA36617.1; -.
EMBL; X52077; CAA36296.1; -.
EMBL; M31175; AAA31043.1; ALT_INIT.
EMBL; X17638; CAA35632.1; -.
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Best Local Similarity 89.5%;
Matches 77; Conservative
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PIR; S12825; S12825.
HSSP; P05019; 1GF1.
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation use Buropean Bioinformatics Institute. There are no restrictions on its modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                        -!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA, ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
                                                                                                                                                                              MEDLINE=8826820; PubMed=3390164;
Francis G.L., UpCon F.M., Ballard F.J., McNeil K.A., Wallace J.C.;
"Insulin-like growth factors 1 and 2 in bovine colostrum. Sequences
and biological activities compared with those of a potent truncated
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                   Honegger A., Humbel R.E.; "Insulin-like growth factors I and II in fetal and adult bovine serum. Purification, primary structures, and immunological cross-reactivities" J. Biol. Chem. 261:569-575(1986).
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                                                                                                                                                                                                                                                                                                                                                                   MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
-!- SUBCELLULAR LOCATION: Secreted.
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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Pred. No. 9.7e-39;
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64201B6AF3140999 CRC64;
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SMART; SM00078; IIGF; 1.
INSULIN; 1.
Insulin family; Growth factor; Plasma; Signal.
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EMBL; S76122; AAD14209.1; --
PIR; A25623; IGBO1.
PIR; S040465; S00465.
PIR; S12672; S12672.
HSSP; P05019; 1GF1.
InterPro; IPR00779; Insulin_IGF_relaxin.
PFAM; PR00279; Insulin, 1.
PRINTS; PR00277; INSULINA.
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MEDLINE=86085881; PubMed=3941093;
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89.5%;
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Best Local Similarity 89.5
Matches 77; Conservative
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17012 MW;
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88.4%;
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AAA31546.1;
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M89787; AAA31544.1;
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PIR, B33390; B33390.
PIR, S07198; S07198.
PIR, S07965; S07965.
HSSP; P05019; IGF1.
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nes 76; Conserv
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X69473;
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X69473;
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X69473;
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P51462;
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IGF1.
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IGF1_COTJA
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MEDLINE-89323215; PubMed-2752053;
Hey A.W., Browne C.A., Simpson R.J., Thorburn G.D.;
"Simultaneous isolation of insulin-like growth factors I and II from adult sheep serum.";
                                                                                                                                                                                 Wong E.A., Ohlsen S.M., Godfredson J.A., Dean D.M., Wheaton J.E.; "Cloning of ovine insulin-like growth factor-I cDNAs: heterogeneity in the mRNA population."; DNA 8:649-657(1989).
                                                                                                                                                                                                                                                                                                                                                                            Ohlsen S.M., Dean D.M., Wong E.A.; Characterization of multiple transcription initiation sites of the ovine insulin-like growth factor-I gene and expression profiles of three alternatively spliced transcripts."; DNA Cell Biol. 12:243-251(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Biochim. Biophys. Acta 997:27-35(1989).
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN-COOPWORTH, TISSUE-Liver;
MEDLINE-9325001; PubMed-8485157;
Demmer J., Hill D.F., Petersen G.B.;
"Characterization of two sheep insulin-like growth factor II chars with different 5'-untranslated regions.";
Blochim. Biophys. Acta 1173:79-80(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ballard F.J., Owens P.C.; II: sequences, activities
                                                                                                Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
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                                                                                   Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
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        01-UUL-1989 (Rel. 11, Created)
01-FEB-1991 (Rel. 17, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
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--- SUBCELLULAR LOCATION: Secreted.
--- ALTERNATIVE PRODUCTS: 3 ISOFORMS, A, B (SHOWN HERE) AND OF PRODUCED BY ALTERNATIVE SPLICING.
--- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE-89136887; Pubmed-2537174;
Francis G.L., McNeil K.A., Wallace J.C.,
"Sheep insulin-like growth factors I and
                                                                                                                                                                                                                                                                                                                    Mol. Endocrinol. 6:17-31(1991).
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MEDLINE=93221682; PubMed=8466647;
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                                                                                                                                                                      MEDLINE=90126234; PubMed=2575490;
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                                                                                                           Bovidae; Caprinae; Ovis.
                                                                                 Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                       Ovis aries (Sheep).
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50 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 109
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PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
Probom; PD001048; Insulin_IGF_relaxin; 1.
PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Signal; Alternative splicing.
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01-0CT-1996 (Rel. 34, Last sequence update)
16-0CT-2001 (Rel. 40, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
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E226CE6AF653CF3F CRC64;
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No. 7.3e-38; J
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1; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       49 GPETLCGAELVDALQFVCGDRGFYFSKPTGYGSSSRRLHHKGIVDECCFQSCDLRRLEMY 108
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                 Rotwein P., Kajimoto Y.; "Structure of the chicken insulin-like growth factor I gene reveals "Structure of the chicken is."; conserved promoter elements."; J. Biol. Chem. 266:9724-9731(1991).
                                                                                         Kajimoto Y., Rotwein P.; "Structure and expression of a chicken insulin-like growth factor
                                                                                                                                                                                                                                                                                        MEDLINE=91106695; PubMed=2272467;
Ballard F.J., Johnson R.J., Owens P.C., Francis G.L., Upton F.M., Medurtry J.P., Wallace J.C.;
"Chicken insulin-like growth factor-I: amino acid sequence, "Chicken insulin-like growth factor-I: amino acid sequence, radioimmunoassay, and plasma levels between strains and during
                                                                                                                                                                                                                                                                                                                                                                                Gen. Comp. Endocrinol. 79:459-468(1990).

-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT MUCH HIGHER GROWTH-PROMOTING ACTIVITY.

-!- SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 384; DB 1; Length 153;
Pred. No. 5e-35;
6; Mismatches 17; Indels
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AAE13FDED13EE2F8 CRC64;
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SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; M32791; AA448828.1; --
EMBL; M74176; AA448829.1; --
PIR; A41399; A41399.
InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PR0049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINA.
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D. PEPTIDE.
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SEQUENCE OF 1-21 FROM N.A.
MEDLINE-91236750; Pubmed-2033062;
                                                           SEQUENCE FROM N.A. MEDLINE=90190648; Pubmed=2628728;
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SEQUENCE OF 49-118.
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tes 75; Conserv
                              NCBI_TaxID=9031;
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                                                                                                                                                 "Insulin-like growth factor-I messenger RNA content in the oviduct of Japanese quail (Coturnix coturnix japonica): changes during growth and development or after estrogen administration."; comp. Biochem. Physiol. 109C:191-204(1994).

-! FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA, ARE STRUCTURALLY AND FUNCTIONALIX RELATED TO INSULIN BUT HAVE A MUCH HIGHER GROWTH-PROMOTING ACTIVITY.

-! SUBCELLULAR LOCATION: Secreted.
-! SUBCELLULAR ELONATION SECRETED.
Coturnix coturnix japonica (Japanese quail).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
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                                                                                                           Kida S., Iwaki M., Nakamura A., Miura Y., Takenaka A., Takahashi S.,
Noguchi T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IGF1.
Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
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01-NOV-1990 (Rel. 16, Last sequence update)
01-CT-1996 (Rel. 34, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
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INSULIN-LIKE GROWTH FACTOR I.
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Pred. No. 3.9e-35;
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Pfam; PF00049; Insulin; 1.
Probom; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
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Insulin family; Growth factor; Plasma.
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Search completed: October 25, 2002, 15:57:35 Job time: 7.68675 secs

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1 GPETLGABLVDALQFVCGP......THKKRKLQRRRKGSTLEEHK 111
               GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Description	Q13429 homo sapien	P97899 rattus sp.	Q9np10 homo sapien	Q14620 homo sapien	Q9n1c1 bos taurus	P79167 equus cabal	093380 meleagris g	Q91230 oncornynchu	Q91476 salmo salar	Q9ibiO cyprinus ca	Q91475 salmo salar	Q91162 oncorhynchu	Q91965 oncorhynchu	P81268 oncorhynchu	Q91161 oncorhynchu	Q91231 oncorhynchu
3 ID	1 013429	11 P97899	014N6O	1 Q14620	5 Q9N1C1	5 P79167	13 093380	13 091230	13 Q91476	13 Q9IBI0	13 Q91475	13 091162	13 Q91965	l3 P81268	13 Q91161	13 Q91231
Query Match Length DB				70.6 137 4					.,					. ,		
Score	486.5	443	423	423	418	402	384	362.5	362	362	361	361	361	361	360	360
Result No.		7	m	4	S	9	7	80	6	10	11	12	13	14	15	16

Gaps

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Best Local Similarity 84.7%; Pred. No. 3.7e-51;
Matches 94; Conservative 2; Mismatches 14; Indels 1;

NON_TER 1 1 SEQUENCE 139 AA; 15611 MW; A62271872CA29DE4 CRC64;

0990vv9 brachydanio 093527 paralichthy 057436 paralichthy 091914 ctenopharyn 093607 paralichthy 098sr6 megalobrama 099wsc carassius a 09pwsc carassius a 09pwsc carassius a 099i82 carassius a 099i84 carassius a 099i84 carassius a 093120 oreochromis 099i82 carassius a 093120 oreochromis 09157 canthopagr 04236 myoxocephal 062807 bubalus bub 091186 capteolus c 09142 squalus aca 09142 squalus aca 09142 squalus aca 09144 carassius a 09144 bos indicus 09140 brachydanio 09160 brachydanio 057687 taenopygia 090w4 tenopus lae	ALIGNMENTS BEGULT 1 13429 0.13429 0.13429 0.13429 0.1-NOV-1996 (TTEMBLEAL) 01, Created) TO 1-NOV-1996 (TTEMBLEAL) 10, Last sequence update) TO 1-NOV-1996 (TTEMBLEAL) 10, Last sequence update) TO 1-DEC-2001 (TEMBLEAL) 10, Last sequence update) TO 1-DEC-2001 (TEMBLEAL) 10, Last annotation update) N IGF-1. S HOMEO sapiens (Human) S HOMEO sapiens (Human) N INGLIA-LIKE GROWTH FACTOR-I (FRAGMENT). N NOLTER TASTOBLE-LIKE, 10 FROM N.A. N NOLTER TO 1-NOV-1996 (TTEMBLEAL) N NATURAL STATE (TASTOBLEAL) TO 1-NOV-1966 (TTEMBLEAL) N NOLTER PROMITS PROMOTO 139 (1001) R PRINTS; PROMOTO 139 (1001) R PROMOTER R PROMOTO 139 (1001) R PROMOTO 139 (1001) R SEQUENCE 139 AA: 15611 MW; A62271872CA29DE4 CRC4;
2.7.7.7.3.3.6.7.3.3.6.7.3.3.6.7.3.3.6.7.3.3.6.7.3.3.6.7.3.3.6.6.6.6	ALIGNMENTS PRT; 139 eated) sst sequence sst annotati FRAGMENT). Cranlata; V Catarrhini; 441; A.J., Ross nn insulin-l expression 195). ETED (BY SI ETED (BY SI : INSULIN/IG
Q900VV9 O93527 O93527 O93607 O99886 Q99886 Q99886 Q99887 O92289 Q97182 Q98187 O42289 Q91837 O4289 Q9187 O4280 Q9187 O9180 Q9180	ALIGN PRT; Created) Last seq Last ann I (FRAGME Last ann I (FRACME a; Catarr rk A.J., uman insu sue expre (1995). ECRETED (THE INSUI n_IGF_relaxi 1.
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Eutheria; Primates; Catarrhini; Hominidae; Homo.
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MEDLINE-91103966; PubMed=1368571;
Match H., Okoshi A., Miura Y., Noguchi T.;
"A new cDNA clone relating to larger molecular species of rat insulinlike growth factor-I mRNA.";
Agric. Biol. Chem. 54:1599-1601(1990).
-! SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-! SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
EMBL: D00698; BAAQ0604.1; -..
HSSP; P01343; IGF1.
                                                                                                                                                                                                                                                                                                                                                           Rattus sp.
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
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              1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
                                    Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGSTLEEHK 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              74.0%; Score 443; DB 11; Length 127; 95.3%; Pred. No. 6.1e-46; Live 0; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                          PARTIAL SEQUENCE FROM N.A. MEDLINE-8722423; PubMed=3034909; Shimatrau A., Rotwein P.; Mosaic evolution of the insulin-like growth factors."; J. Biol. Chem. 262:7894-7900(1987).
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104E126BCFCA5CB7 CRC64;
                                                                                                                                                                                                                                                                                                    Last sequence update)
Last annotation update)
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Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRODOT; INSULINA.
PRODOM; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM0078; IIGF; 1.
                                                                                                                                                                                                                                                                                 Created)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         127 AA; 14106 MW;
                                                                                                                                                                                                                                                                                                                     01-DEC-2001 (TrEMBLrel. 19, Lainsulin-Like GROWTH FACTOR I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS00262; INSULIN; 1.
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                                                                                                                                                                                                                                                                             01-MAY-1997 (TrEMBLrel. 03,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                       PRELIMINARY;
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P97899;
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ID P99P9
DT O11

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SEQUENCE FROM N.A.
MEDLINE=88065102; PubMed=3683205;
Rall L.B., Socht J., Bell G.I.;
"Human insulin-like growth factor I and II messenger RNA: isolation of complementary DNA and analysis of expression.";
Meth. Enzymol. 146:239-248(1987).
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SEQUENCE FROM N.A.
MEDLINE=91187000.
MEDLINE=91187000.
Tobin G., Yee D., Brunner N., Rotwein P.;
Tobin G., Yee D., Brunner N., Rotwein P.;
"A novel human insulin-like growth factor I messenger RNA is expressed in normal and tumor cells.";
Mol. Endocrinol. 4:1014-1920(1990).
SUBCELGUAR LOCATION: SECRETED (BY SIMILARITY).
SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
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                                                                                                                                                                                    - SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
- SINDICELLULAR LOCATION: SECRETED (BY SIMILARITY).
- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
- BABL; M29644; AA552543.1;
- HSSP; P01343; IGF1.
- INTERPRO; IPR000799; Insulin_IGF_relaxin.
- PRINTS; PR00276; INSULINA.
- PRINTS; PR00177; INSULINB.
- PRODOM: PD001048; Insulin_IGF_relaxin; 1.
- SMART; SM00078; ILGF; 1.
- PROSITE; PS00262; INSULIN; 1.
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33 137 INSULIN-LIKE GROWTH FACTOR
137 AA: 15177 MW; BFCCOD11E32AB75D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 25 POTENTIAL.
26 95 POTENTIAL.
130 AA; 14406 MW; 970FBAABCFA0352D CRC64;
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 423; DB 4; L
Pred. No. 1.7e-43;
1; Mismatches 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            137 AA
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90.7%;
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HSSP; P01343; 1GF1.
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Best Local Similarity 90.79
Matches 78; Conservative
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139 AA;
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                                NCBI_TaxID=9796;
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NON_CONS
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                                 Gaps
                                                              1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
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                                                                                                                                                                                                                                                                                                           Lien S., Karlsen A., Klemetsdal G., Vage D.I., Olsaker I., Kindyland H., Aasland M., Heringstad B., Ruane J., Gomez-Raya L.;
"A primary screen of the bovine genome for quantitative trait loci affecting twinning rate.";
submitted (DEC-1999) to the EMBL/GROBBAN/DDBJ databases.
-! SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-! SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
EMBL; AF210387; AAF72409.1; JOINED.
                                                                                                                                                                                                                                     Bos taurus (Bovine).
Sukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae, Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-MAY-1997 (TrEMBLrel. 03, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR IB PRECURSOR (IGF-IB) (SOMATOMEDIN C)
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Score 423; DB 4; Lengua ...
Pred. No. 1.8e-43;
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89.5%; Pred. No. 6.9e-43;
***ematches 8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A6991DBCB75C103B CRC64;
                                                                                                                                                                                 01-07T-2000 (TrEMBLrel. 15, Created)
01-07T-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I (FRAGMENT).
                              1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                               HSSP; P01343; IGF1.
InterPro; IPR000739; Insulin_IGF_relaxin.
PRINTS; PR00276; INSULINA.
PR00277; INSULINB.
PRODOM; PD001048; Insulin_IGF_relaxin; 1.
SWART; SM00078; IIGF; 1.
                                                                                                     PRT;
                                                                                                                                                                 PRT;
                                                                                         61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 133 AA; 14674 MW;
       70.6%;
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                              78; Conservative
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Matches 77; Conservative
                                                                                                                                                                PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Equus caballus (Horse)
                    Best Local Similarity
                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                               NCBI_TaxID-9913;
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SEQUENCE
         Query Match
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Q9N1C1;
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                              Matches
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Otte K., Rozell B., Gessbo A., Engstrom W.; "Cloning and sequencing of an equine insulin-like growth factor I cDNA and its expression in fetal and adult tissues.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                     MUCH HIGHER GROWTH PROMOTING ACTIVITY.

-!- SUBCELLULAR LOCATION: SECRETED.
-!- ALTERNATIVE PRODUCTS: TWO ISOFORM IGF-IA (P51458) AND ISOFORM IGF-IB (SHOWN HERE); ARE PRODUCED BY ALTERNATIVE SPLICING (BY SIMILARITY).
-!- SIMILARITY).
-!- SIMILARITY BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
EMBL; U28070; AAA68952.1; --
EMBL; U38070; AAA68952.1; --
EMBL; U6871; AAB47484.1; --
EMBL; D1343; IGFL.
InterPro; IPRO00739; Insulin_IGF_relaxin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                           FROM PLASMA,
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
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                                                                                                                                                                                                                                                                                                                   SEQUENCE OF 123-139 FROM N.A.
Nixon A.J., Toland B.D., Sandell L.J.;
Submitted (Jan-1997) to the BMBL/GenBank/DDBJ databases.
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BY SIMILARITY.
INSULIN-LIKE GROWTH FACTOR IB.
B.
C.
A.
D.
E PEPTIDE.
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01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR-I PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 402; DB 6;
Pred. No. 6.2e-41;
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BY SIMILARITY.
BY SIMILARITY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PD001048; Insulin_IGF_relaxin; 1.
                                                                                                                                                                                                                                                                      Comp. Endocrinol. 102:11-15(1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE, PS00262, INSULIN, UNKNOWN_1.
Insulin family; Growth factor; Signal.
                                                                                                                                    TISSUE=LIVER;
MEDLINE~97013467; PubMed=8860303;
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                                                                                                        SEQUENCE OF 1-122 FROM N.A.
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PRINTS; PR00277; INSULINB.
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SMART; SM00078; IlGF; 1.
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Q91476;
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                                                                                                                                                                                                                                                       Archosauria; Aves; Neognathae; Galliformes; Meleagrididae; Meleagris.
NCBL_TaxID=9103;
                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                             1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                   Oncornynchus tschawytscha (Chinook salmon) (King salmon).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostel; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
NCBI_TaxID=74940;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
STRAIN-BIG QUALICUM RIVER, B.C.; TISSUE-LIVER;
MEDLINE=9347592; PubMed=7683374;
Mallis A.E., Dovlin R.H.;
"Duplicate insulin-like growth factor-I genes in salmon display alternative splicing pathways.";
Mol. Endocrinol. 7:409-422(1993).
                                                                                                                                                                                                                              8;
                               Length 153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INSULIN-LIKE GROWTH FACTOR-I.
5AF1E5B8D13C70B5 CRC64;
                                                                                                                                                                                                                             17; Indels
                                                                                                                                                                                                                                                                                         109 CAPIKPPKSARSVRAQRHTDMPKAQ-----KELHLKNTSRGNT 146
                                                                                                                                                                                                                                                                               61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGST 106
                                                                                                                                                                                                                                                                                                                                                         01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
                                                                                                                                                                                                            Score 384; DB 13;
Pred. No. 1e-38;
                                                                                                                                                                                                    64.1%; Sco. No. 1c. 69.8%; Pred. No. 1c. 7; Mismatches
                                                                                                                                                                                                                                                                                                                                           161 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; U15961; AAA67267.1; -...
HASEP; PO1344; UGFL.
INTERPO: INTERPOOR 19: Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00277; INSULINA.
PRINTS; PR00277; INSULINB.
PRINTS; PR001077; INSULINB.
                                                                                                                                                                          POTENTIAL.
                                                                                                                                                                        1 48 PG
49 118 II
153 AA; 17295 MW;
                                                                                                                                                                                                                                                                                                                                                                                    INSULIN-LIKE GROWTH FACTOR-I.
                                                                                                                                                                                                                   Local Similarity 69.8 les 74; Conservative
                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                         SEQUENCE FROM N.A.
                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                            Query Match
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                                                                                                    Gaps
                                                                                                                                       1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-NOV-1996 (TrEMBLrel. 19, Last annotation update)
10-DEC-2001 (TrEMBLrel. 19, Last annotation update)
1NSULIN-LIKE GROWTH FACTOR I PRECURSOR (FRAGMENT).
Salmo salar (Atlantic salmon).
Sukaryota; Metazoa; Chordeta; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Salmo.
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                                                            Length 161;
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                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19; Indels
                                                                                                                                                                                                                    61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLS--THKKRKLQRRRKGS 105
                                                                                                                                                                                                                                         105 CAPVKSGKAARSVRAQRHTDMPRTPK-KPLSGNSHTSCKEVHQKNSS 150
                    161 AA; 17763 MW; A5A85D121377BF67 CRC64;
                                                            DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 362; DB 13;
Pred. No. 3.6e-36;
9; Mismatches 19;
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                                                          60.5%; Score 362.5; DB 1
66.4%; Pred. No. 4.4e-36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLS--THKKRK 97
                                                                                                11; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINA.
PRODOM; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                178
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<1 18 PO;
19 88 IN;
117 AA; 12867 MW; i
PROSITE; PS00262; INSULIN; 1. SEQUENCE 161 AA; 17763 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60.4%;
                                                                               66.48;
                                                                             Best_Local Similarity 66.49
Matches 71; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 69.7*
                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
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                                                            Query Match
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PS00262; INSULIN;
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SEQUENCE
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NON_TER
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  PROSITE;
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                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                 1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE-LIVER;
MEDLINE-93024477; PubMed-1406698;
Duguay S.J., Park L.K., Samadpour M., Dickhoff W.W.;
"Nucleotide sequence and tissue distribution of three insulin-like
                                         Cyprinus carpio (Common carp).

Bukaryota: Metazoa: Chordata: Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Ostariophysi;
Cypriniformes; Cyprinidae; Cyprinus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Salmo.
                                                                                                                                                                                                                                                                                                                              4;
                                                                                                                                                                                                                                                                                                         Length 178;
                                                                                                                                                                                                                                                                                                                                                                                           61 CVRCKPTKSARSIRAQRHTDMPKTQK----SQPLSTHKKRKLQRRRKGST 106
                                                                                                                                                                                                                                                                                                                                                                                                      Mol. Endocrinol. 6:1202-1210(1992).
-!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                    178 AA; 19687 MW; 7075A34FF379C459 CRC64;
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I SUBTYPE EA2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            update)
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I PRECURSOR (FRAGMENT).
                                                                                                                                                                                                                                                                                                         60.4%; Score 362; DB 13;
62.7%; Pred. No. 5.7e-36;
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Interpro; IPR000739; Insulin_IGF_relaxin. Ffan; PP00049; Insulin; 1. PRINTS; PR00276; INSULINA. PRINTS; PR00277; INSULINA. PRINTS; PR00137; INSULINA. PRINTS; PR00148; Insulin_IGF_relaxin; 1. SMART; SM00078; IIGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   145 AA
                                                                                                                                                                                                                                                                                                                62.7%; Preu. ...
+ive 13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                growth factor I prohormones in salmon.";
                                                                                                               TISSUE=LIVER;
MEDLINE=96241923; PubMed=8680527;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Salmo salar (Atlantic salmon).
                                                                                                                                                                                                                                                              SMART; SM00078; ILGF; 1.
PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                   Best_Local Similarity 62.78
Matches 69; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                      SEQUENCE FROM N.A.
                                                                                 NCBI_TaxID=7962;
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01-OCT-2000
01-DEC-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Duguay S.J, Park L.K., Samadpour M., Dickhoff W.W.; "Nucleotide sequence and tissue distribution of three insulin-like
                                                                                                                                                                                                      19 GPETLCGAELVDTLQFVCGERGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
1-DEC-2001 (TrEMBLrel. 19, Last annotation update)
1NSULIN-LIKE GROWTH FACTOR I PRECURSOR (FRAGMENT).
ONCOTHYNCHUS KISUTCH (COHO SALMON).
ENLARYOLAS MALAZOR; CHORDALA; CRANIATA; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Profacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
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-hos 24; Indels
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INSULIN-LIKE GROWTH FACTOR
      POTENTIAL.
INSULIN-LIKE GROWTH FACTOR
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                                                              15885 MW; 3D94EDF477268FC4 CRC64;
                                                                                                                                                                                                                                                                                 61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRR 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60.3%; Score 361; DB 13;
67.3%; Pred. No. 6.5e-36;
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                                                                                                                                          9; Mismatches
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Pfam. PF00049; Insulin. 1
PRINTS; PF00276; INSULINA.
PRINTS; PR00277; INSULINB.
PRODOM; PD001048; Insulin_IGF_relaxin; 1.
                                                                                                     Score 361;
Pred. No. 6
                                                                                                                                                                                                                                                                                                                                                                                                                                          01-NOV-1996 (TrEMBLrel. 01, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-90190659; PubMed-2628735;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE=LIVER;
MEDLINE=93024477; PubMed=1406698;
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                                                                                                                        67.3%;
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                                                                                                                                          68; Conservative
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18
>88
145
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>88
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155
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Matches 68; Conserv
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SEQUENCE FROM N.A.
                                                                                                                          Similarity
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SEQUENCE FROM N.A
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Oncorhynchus tschawytscha (Chinook salmon) (King salmon).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
                                                                                                                                                                                                                MEDLINE-93247592; PubMed-7683374;
Wallis A.E., Devlin R.H.;
"Duplicate insulin-like growth factor-I genes in salmon display
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 188;
                                                                                                                                                                                                                                                                                                                        Devlin R.H.;
Submitted (SEP-1994) to the EMBL/GenBank/DDBJ databases.
SubcEtLULAR LOCATION: SECRETED (BY SIMILARITY).
-:- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                     60.3%; Score 361; DB 13; Length 1 67.3%; Pred. No. 8e-36; ive 9; Mismatches '24; Indels
                                                                                                                                                                                                                                                                                        Submitted (OCT-1994) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                               PS00262; INSULIN; 1.
188 AA; 20782 MW; F4D705BA811024B8 CRC64;
                                                                                                                 01-NOV-1996 (TrEMBLrel. 01, Last sequence update) 01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
                                         CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRR 101
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                                                                                                                                                                                                                                                                                                                                                      Created)
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                                                                                                                                                                                                                                         alternative splicing pathways.";
Mol. Endocrinol. 7:409-422(1993).
                                                                                                                                INSULIN-LIKE GROWTH FACTOR-I.
                                                                                                         01-NOV-1996 (TrEMBLrel. 01,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        68; Conservative
                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
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Q91965;
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45 GPETLCGAELVDTLQFVCGERGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY 104
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                                                                                                                                                                                                                                                                                                   Kavsan V.M., Grebenjuk V.A., Koval A.P., Skorokhod A.S.,
Roberts C.T. Jr., Leroith D.;
"Isolation of a second nonallelic insulin-like growth factor I gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ulany 1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
10-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I PRECURSOR (FRAGMENT).
ONCORTHYPHORUS KISUTCH (COHO salmon).
BUKATYOTA: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostel; Euteleostel;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
                                                                                                  Oncorhynchus keta (Chum salmon).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
                         01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I.1 PRECURSOR (IGF-I.1) (SOMATOMEDIN)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRONTS; PR00277; INSULINB.
ProDom; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; I1GF; 1.
PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Multigene family; Signal.
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0
                                                                                                                                                                                                                                                                                                                                                                              from the salmon genome.";
DNA call Biol. 13:555-559(1994).
-!- FUNCTION: THE INSULINE GROWTH FACTORS, ISOLATED FROM
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INSULIN-LIKE GROWTH FACTOR I.1.
B.
C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MUCH HIGHER GROWTH-PROMOTING ACTIVITY.

-!- SUBCELLULAR LOCATION: SECRETED.
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
EMBL; AF063216; AAC18833.1; -.
HSSP; P01343; 1GF1.
InterPro; IPR000739; Insulin_IGF_relaxin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                F4CEB6D05E0F24B8 CRC64;
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01-AUG-1998 (TrEMBLrel. 07, Last sequence update) 01-DEC-2001 (TrEMBLrel. 19, Last annotation updat-
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Pred. No. 8e-36;
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E. PEPTIDE.
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                                                                                                                                                                                                                                                                                 MEDLINE=94296559; PubMed=8024699;
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188
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188 AA;
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Best Local Similarity
Matches 68; Conserv
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WEDLINE-93024477; PubMed=1406698;

MEDLINE-93024477; PubMed=1406698;

MEDLINE-93024477; PubMed=1406698;

MINCLEOCIDE SOLY, PETK L.K., Samadpour M., Dickhoff W.W.;

Duguay S.J., PETK L.K., Samadpour M., Dickhoff W.W.;

T "Mucleocide sequence and tissue distribution of three insulin-like

RY "Mucleocide sequence and tissue distribution of three insulin-like

RY "Mucleocide sequence and tissue in salmon.";

MOI. Endocrinol. 6:1202-120(1992).

TO SUBCELLULAR ICCATION: SECRETED (BY SIMILARITY).

EMBL; M91911; A895947.1;

MSSP; PRIO1343; 1GF1.

PRINTS; PRO0276; INSULINB.

PRINTS; PRO0276; INSULINB.

PRINTS; PRO0276; INSULINB.

PRODEN; PRO0276; INSULINB.

PROSITE; PSO0262; INSULINB.

PROSITE; PSO0262; INSULINI, 1.
TISSUE-LIVER;
MEDLINE-90190659; PubMed-2628735;
Cao Q.P. Duquay S.J., Plisetskaya E., Steiner D.F., Chan S.J.;
"Nucleotide sequence and growth hormone regulated expression of salmon insulin-like growth factor I mRNA.";
Mol. Endocrinol. 3:2005-2010(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8; Gaps
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60.1%; Score 360; DB 13; Length 116;
Best Local Similarity 65.1%; Pred. No. 6.3e-36;
Matches 69; Conservative 10; Mismatches 19; Indels
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18 POTENTIAL.
>88 INSULIN-LIKE GROWTH FACTOR
116
12697 MW; C5F378915179D89D CRC64;
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61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGST 106

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